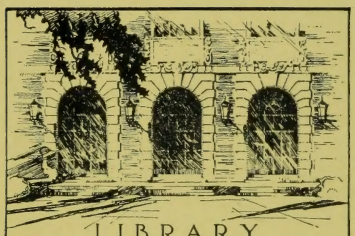

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REPORT

OF THE

Commissioner of Health

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WALTER KEMPSTER, M. D.,

COMMISSIONER OF HEALTH.

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MILWAUKEE:
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JAN 25

OFFICERS AND EMPLOYES

OF THE

Health Department of the City of Milwaukee

For the Year Ending April 17, 1897.

Commissioner of Health.

WALTER KEMPSTER, M. D.

Medical Assistants to Commissioner of Health.

H. E. BRADLEY, M. D., T. H. HAY, M. D., W. H. WASHBURN, M. D., L. SCHILLER, M. D., A. B. GRIDER, M. D.

Food Analyst.

W. C. BENNETT, M. D.

Consulting Staff to City Isolation Hospital.

SOLON MARKS, M. D., U. O. B. WINGATE, M. D., JACOB LANGE, M. D.

Registrar of Vital Statistics.

JOHN W. COON, M. D.

Secretary.

ALBERT E. KUOLT.

Clerk.

JULIUS LASCHE.

Stenographer.

MISS N. H. TAYLOR.

OFFICERS AND EMPLOYES—CONTINUED.

Sanitary Police.

CHAS. J. FRICKER, Chief Sanitary Inspector.

DAVID THOMAS, Chief of Disinfecting Corps.

CHAS. NIMMER, Meat Inspector.

JOHN RODERMUND, Meat Inspector.

BYRON OLESON.

E. W. DIERCKS.

THEO. WEIL.

J. A. OSMUNSON.

PETER FEICHTINGER.

B. VAN ECHTERN.

CHAS. WEISER.

AUGUST PUTTLER.

HARRY KIEHL.

T. J. HANNAN.

JAS. CUNNINGHAM.

GOTTLIEB SCHWEIZER.

JOHN DOLGE.

A. J. FIRLE.

Matron to City Isolation Hospital for Contagious Diseases.

MISS KATE A. DOHERTY.

Cook to City Isolation Hospital.

SARAH HAEUSLER.

Janitor to City Isolation Hospital.

MIKE HAEUSLER.

COMMITTEE ON HEALTH

OF THE

BOARD OF ALDERMEN.

A. J. DOELGER, *Chairman.*

W. H. STARKWEATHER.

H. J. SCHMIDT.

O. T. RENNING.

FRED. STEINMUELLER.

A. DIETRICH.

F. NIEZORAWSKI.

NOTICE.

This book belongs to the **PUBLIC.** **YOU** are one of the public. Take care of **YOUR OWN PROPERTY** and see that others do not injure it.

CITY ORDINANCE No. 17,549.

SEC. 3. Every person who shall wilfully and wantonly cut, mutilate, mark, tear, write upon, deface, or otherwise destroy or injure, in whole or in part, any book, pamphlet, periodical, map, document, picture, or written or engraved or printed paper, belonging to the Public (Free) Library, or shall suffer any such injury to be inflicted while such property is in his custody, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be punished by a fine in the sum of not more than $100.

Unless otherwise reported, the last borrower will be held responsible for any imperfections discovered.

To the Honorable the Mayor and Common Council of the City of Milwaukee:

GENTLEMEN—I have the honor to transmit herewith the Annual Report of the Health Department for the year ending April 17, 1896, being the twentieth annual report of the department.

The total number of births reported for registration during the year was 7,855, of which 4,075 were boys and 3,780 girls.

The total number of deaths from all causes for the same period was 3,904—2,061 males and 1,843 females. The annual death rate, based upon a population of 260,000, is 15.00.

During the year 1896 1,297 of the deaths occurred among children under one year of age, or 33.2 per cent. of the total deaths; and of the total deaths there were 1,791 among children under five years of age, or 45.8 per cent. of the whole. This is the lowest percentage of deaths occurring among children under five years of age in the history of the health department of this city. Since the year 1892 the deaths among children under five years of age have been as follows:

1892	2,223	deaths,	or	49.2	per cent.
1893	2,317	"	"	51.9	"
1894	2,091	"	"	49.2	"
1895	1,825	"	"	46.9	"
1896	1,791	"	"	45.8	"

It will be observed that notwithstanding the city's growth since 1892, the deaths among children under one year of age are lower than in any year since 1892, and the same fact is observed among children under five years of age, viz, 1,791; so

REPORT.

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It will be observed that notwithstanding the city's growth since 1892, the deaths among children under one year of age are lower than in any year since 1892, and the same fact is observed among children under five years of age, viz, 1,791; so

that notwithstanding the city's growth, which has amounted to 37,000 since 1892, there has been not only a falling off in the percentage, but a decrease in the whole number of deaths among children.

During the year 1896 there were 404 deaths among children under one year of age caused by diseases of the digestive apparatus, a smaller number than for any year in the history of this department. During the terrible hot weeks in July the death rate among young children was largely increased, more especially among those children whose environment is not of the best.

The low death rate among children, I believe to be due to the improved quality of milk which forms a staple article of food for so many children between the first, third and fourth years of their age.

Hitherto the percentage of mortality has ranged at about 48 per cent., sometimes being as high as 52 per cent. In the year 1895 systematic daily examinations were begun of the milk which came into this city for use, and while the method was at that time by no means perfect, the percentage of deaths in the year 1895, among children, dropped to 46.9 per cent., notwithstanding the long, hot summer that prevailed. Since that time the methods of milk examination have been extended and improved, and coincident with this improvement there has been a falling off in the percentage of deaths to 43.3 per cent., the lowest death rate among children ever recorded in this department.

The greatest number of deaths among young children occur during or immediately after extreme warm weather, and it is at this season that the causes of mortality are at their height; cholera infantum, diarrhœa, disorders of the stomach and convulsions are then most common, the diseases connected with the digestive organs predominating.

In relation to this subject a statement has been made in an essay which received a prize, and which was published in the Royal Statistical Society, March, 1894, in which Dr. H. R.

Jones, the author, says that "Diarrhœa is exceedingly fatal during the first year of life, more especially during the earlier months. This fatality in great measure is due to the improper feeding of infants. Owing to the neglect and ignorance of their mothers the infants are fed on contaminated milk or other food. An attack of acute diarrhœa is developed, and if the attack is fatal the child very generally dies within seven days."

It is, I believe, the experience of physicians the world over that acute intestinal disorders are brought on by the use of impure or improper food, and that it is to this circumstance more than to the ignorance or neglect of the mothers that the great mortality in the earlier months of infant life is chargeable. Infants nourished entirely by the mother's milk are almost wholly exempt from these intestinal disorders. It is among those who, for some reason or other, are fed on milk from cows or prepared foods, that the greatest mortality obtains; and it is generally believed by those who have the greatest opportunity for observation, that infant mortality is greatest among those children fed on cow's milk, more especially among the children of the very poor, who, by reason of their great poverty, become the easier victims to the cupidity of those who adulterate milk, or who take into these poorer parts of the community milk which they are unable to dispose of in other quarters. This milk is often robbed of its cream, then water added, and sometimes a preservative or agent to prevent the milk from becoming "sour" or to cover the taste, if it has already begun to ferment.

The investigations which have been carried on during the past year in the laboratory attached to this department have shown that all these methods have been made use of by unscrupulous persons engaged in selling milk in this city, and it has required systematic, persistent and continuous effort to stop this outrageous practice; the methods made use of and still in force have resulted in checking this robbery and in improving the quality of the milk nearly 50 per cent.

It is but recently that sanitary authorities have commenced a determined warfare upon such reprehensible processes, and the investigations have shown conclusively that many disorders are clearly traceable to the milk supply.

Milk vendors have not been over-scrupulous in their methods of neatness, either in obtaining the milk from the udder of the cow, or as to the containers which convey it to market, or in the cleanliness of the vessels in which it is kept.

Those who are unfamiliar with the conditions found among dairymen who are not scrupulously clean in their methods would be astonished and disgusted at the material which is found in milk that has been examined in our laboratory; it includes particles of manure, bits of cow's food, numerous hairs, mould, and fungus growths, bits of insects, threads, human hair, moss and other disgusting substances.

Not only do all of these things find their way into the milk of the untidy dairyman, but diseases affecting the animal from which the milk is drawn may be communicated through the germ which finds its way into the milk. More especially is this true of the germ causing consumption.

By proper observation and necessary legislation all of these unwholesome conditions may be removed, and it has been the effort of this department for the past year to bring about such changes in the method of handling milk from the cow to the place where it is consumed, that all of the conditions above enumerated shall be reduced to the minimum, and it affords me gratification to state that our efforts in this direction have met with decided success. Not only has the richness of the milk been improved throughout the city by keeping a constant watch upon the quantity of fat that the milk contains, but also in the oversight of the vessels in which the milk is handled, with the gratifying result that there has been a decided improvement in the quality and purity of this important article of diet.

The standard for the richness of milk in this State is as low as it is anywhere in the world. Wherever law has attempted

to regulate the sale of milk it is provided that it shall contain a certain percentage of butter fat, and this quantity ranges between 3 and 4 per cent. In no country in the world is it less than 3 per cent., which is the standard required by law in the State of Wisconsin. To show that this is not a high rate, or that it requires an extraordinary herd of dairy cattle to produce milk of this quality, I quote here the results of 13,196 analyses of milk made in different parts of the world during the year 1892, and the average of all these analyses show that the milk yielded 3.91 per cent. of fat and 12.71 per cent. of solids. During the year 1894 we have statistics of 28,455 analyses made in different countries, with an average percentage of fat of 3.86 and 12.67 per cent. of solids. In a grand total of 52,732 analyses there was an average of 3.87 per cent. of fat and 12.67 per cent. of solids. In a large number of instances these analyses have been made to show the relative proportion of fat and solids in both the morning milk and the night milk. The morning milk has an average of 3.64 per cent. of fat and 12.47 per cent. of solids, including fat, while the night milk contains an average of 4.03 per cent. of fat, with 12.84 per cent. of solids.

The investigations show conclusively that the milk from herds which are fed on good nutritious food is superior in every respect to the milk from herds poorly fed or improperly cared for. This fact is made still clearer by an experiment tried in New York on several herds of cattle, the results showing that the cows gave in their milk practically the amount of fat which was given to them in the food which they ate. Attention is called to this circumstance because it is so frequently asserted that it does not make much difference what food is given to dairy cows, providing they like it; and it demonstrates that the wretched slush given to many cows kept in this neighborhood, obtained from distilleries and vinegar factories, is not proper food, and that animals fed upon this stuff can not and do not give rich or wholesome milk. Nature has provided that milk should contain about 4 per cent. of butter fat and about 13 per cent. of

solids; when, therefore, these percentages are tampered with by removing the fat, which is the cream, or diluting the solids by adding water, the nutritive properties of the food are interfered with and are, therefore, incapable of supplying the material needed to maintain healthful conditions in those who partake of it as food.

One of the most interesting facts relating to this matter may be found in an article published by Mr. Nathan Straus of New York, in "The Forum," November, 1894, wherein he relates the experience derived from a charitable and philanthropic effort to benefit the condition and possibly reduce the death rate of children in one of the poorest localities in New York. The deductions made from his good work are summed up briefly as follows:

"Here in New York City the lives of thousands of children are sacrificed every summer simply and solely because they are fed with impure milk. Of people who die in the State of Maine every year, children under five years of age count for less than 20 per cent.; of those who die in New York City over 40 per cent. are children under five years of age."

He found also that within a certain area of what he calls the metropolitan district, there were 64 per cent. of one week's death roll, of babies under two years of age who were almost wholly dependent upon milk for their nutriment. "Could the destruction that wasteth at noonday have been more palpably present than death in these childrens' milk bottles."

"The conditions of a wholesome milk supply are simple, but like a good many other simple things, difficult of attainment. These conditions are healthy cows, clean stables, clean and careful processes in milking, and a proper transfer of the milk, properly cooled in perfectly clean and closed vessels, from the cow to the consumer. In the milk supply of all great cities, every one of these requisites is flagrantly violated. The inspection of the cow stables to detect the presence of disease is neither careful nor constant; milking is done in most cases under conditions indescribably filthy, and most of the milk consumed by the children of the poor is at least thirty-six to forty-eight hours old before it reaches them. It is a simple matter to understand—as Prof. Sedgwick, of Boston, puts the case: 'How this rich animal fluid—sterile at the start, but drawn by unclean hands into half-clean pails, and meanwhile sprinkled from above by the dust of the stable, by hairs, dandruff, dirt and particles of excrement from the skin and udder of the cow, vigorously shaken by the milker or brushed by his hat—becomes infested

with organisms that aerated by the act of milking, is also a natural consequence of favorable conditions; and, if we allow time also, the wonder is, not that it contains so many germs, but rather that it is potable at all.' "

These investigations of Mr. Straus taught him that he must start at the fountain head if he desired to correct the evil, so he secured the co-operation of the Board of Health of New York, and the stables, herds and dairies were inspected, and good food and cleanliness insisted upon; then the milk was cooled in a proper manner and transported in clean vessels. The immediate result upon the death rate among the children was a reduction of 10 per cent., which percentage has been still further increased through the instrumentality of Mr. Straus and the co-operation of the Board of Health.

Not only is it found to be true that by cleanliness the graver forms of disease among children may be largely prevented, but a number of disagreeable forms of disease not necessarily fatal in character may be altogether removed if the germs of these disorders do not get into the milk, or that they may be removed or destroyed before the milk reaches the child.

Dr. Russell, the eminent bacteriologist of the Wisconsin Experiment Station, who has devoted years of painstaking inquiry to the examination of this subject, found that milk drawn from a herd in the ordinary careless way and mixed, contained 15,500 germs of all kinds in about a teaspoonful, while from a cow carefully cleansed and milked with clean hands, there were but 330 germs in the same amount, and this latter number may be nearly all destroyed by the proper treatment of milk.

The work of examining and analyzing milk began in the health department of this city in June, 1896, but arrangements were not thoroughly perfected and the organization completed for several months thereafter, but from the 1st of June, 1896, until the 1st of June, 1897, 3,184 analyses were made. Of this number 273 samples were found to contain less than 3 per cent. of fat, and 160 samples contained less than the total solids required by law. The average percentage of fat for the entire 3,184 samples, including those having less than

3 per cent. of fat, shows the average to be 3.62. Of all samples examined, including the samples which were above 3 per cent., viz., 2,911, the average percentage of fat was 3.72. So that any statement made that 3 per cent. is a high average is shown to be incorrect. The experience obtained in our own laboratory is corroborative of results obtained elsewhere, not only with reference to the fats and solids contained in milk, but what is of far greater importance, that the great decrease in the death rate among young children already alluded to, began after rigid and systematic examinations were commenced, and demonstrates better than any arguments the necessity for continuing the work in operation.

One other step must be taken in order to still further reduce the possibilities of disease among milk consumers, which includes both infants and invalids.

It has been demonstrated over and over again that the germ of tuberculosis or consumption may be transmitted from a cow afflicted with this disease through the milk to the person who drinks it. This fact has been proven; it is, therefore, of the utmost importance to prevent the transmission of this fatal germ. The means are at hand to accomplish this, and the test should be applied to every cow from which milk is obtained for use in this city.

As the test is not dangerous and does no injury to any animal not afflicted with consumption or tuberculosis, there is no reason why the test should not be applied, and I would suggest the propriety of providing by ordinance that before a license to sell milk is granted to any person, they must present a certificate from the State Veterinarian that the cows owned by the applicant for license, have been subjected to the test referred to and found free from tuberculosis.

This is in no sense a hardship upon the owners of herds or of single animals, but would be an additional safeguard of great value in the prevention of this disease.

A recent report coming from the State of Connecticut (1895) says:

"There appears a statement that an epidemic of typhoid fever, in which 400 cases occurred in a poulation of 1,500, where a brief inquiry clearly demonstrated that all, or nearly all, of the cases occurred among the customers of a single milk dealer, and the investigation showed conclusively that the epidemic was caused by infected milk, and the conclusion reached was that the milk became infected from contaminated well water, which had been used for washing the cans."

During the year 1896 the inspectors of this department found cases of dangerous, contagious disease, meaning thereby diphtheria, scarlet fever and typhoid fever, in houses used as headquarters for supplying food and milk to certain localities within the city. In every instance all the milk was seized and destroyed, and the work of distribution stopped until the disease had disappeared, the house disinfected, and all apparatus used in handling milk had been thoroughly cleansed.

Each handling of milk increases the liability of contamination, and it has been the effort of this department to bring about such changes as will lessen the handling as far as it is possible to do so. Furthermore, it has been my effort to get retailers to deliver milk to their customers in glass bottles, which should be sterilized before the milk is put in; each bottle to be provided with a cork which can be used but once. Several dealers have already complied with this request, and it must be apparent that a method which reduces the number of times of exposure, and provides for delivering milk to the consumer in clean, sterilized bottles, must be an improvement upon the old-fashioned method of using a dipper of questionable cleanliness, constantly returning it to the large receptacle or can, necessitating almost constant exposure of the milk to the filthy particles of dust blown up from our city's streets, as well as the danger which lurks in the unclean milk cans and dippers.

During the summer a dairyman came to this office for advice as to what could be done to remove a peculiar odor which he detected in the milk, and which he said he could not remove. A sample of milk was brought for examination, and found to contain bacteria which thrive in joints of tin cans,

pails or other containers, where they multiply by millions. The bacteria were separated from the milk which he brought, and cultures made of them. The dairyman had no difficulty in recognizing the peculiar odor complained of, but was very much astonished to learn that its existence depended upon the fact that his milk receptacles were not properly cleansed. When this was done the odor complained of disappeared.

Analyses of milk made in this department have shown that lake water has been added to the milk as a diluent, and in other instances well water; several cases of the latter kind showing that the well from which the water came was filthy and the water unfit for drinking purposes, but it had been added to the milk so that nearly one-third of the entire bulk was water. In one case, when the dairyman was confronted with the results of the test made in the laboratory, showing that a large proportion of water had been added, he then confessed that he had put in five quarts of water to every thirty quarts of milk.

It has been the object of the department to stop this system of robbery, and provide pure, wholesome milk to consumers throughout the city. The magnitude of this work will be more clearly appreciated when the fact is made known that the number of persons now engaged in selling milk within the city limits of Milwaukee is over one thousand.

Not only does the department analyze samples of milk, but the examination extends to the condition of the herds and the stables, as well as of the food supplied to the cattle.

It has been said above that milk taken in a careless manner and put into unclean receptacles contains large numbers of germs dangerous to health; but that clean milk received into clean receptacles contains a relatively small number of bacteria. These may be destroyed or rendered harmless, so that the milk will not injure infants or invalids if prepared in accordance with the following directions: Take the milk which is received in the morning, one, two or three pints, and put it into a straight-sided tin can, which has been previously scalded

thoroughly; put the can containing the milk into a tin pail or kettle, resting the bottom of the milk can on an inverted pie plate, so that the bottom of the milk can shall not come in contact with the direct heat or flame; then fill the pail or kettle with water to the height of the milk in the can; heat the water until the temperature is 155 F., stirring the milk from time to time; then put a close-fitting cover on the milk can. Do not permit the temperature to exceed 160 degrees; keep it at that temperature for twenty minutes, then remove the can of milk and put it instantly into a pail of ice-cold water until thoroughly cooled; it may then be kept in the refrigerator until required. The temperature of 160 degrees maintained for twenty minutes will destroy the activity of nearly all living organisms, except, perhaps, the germ of tuberculosis. The propagation of this germ must be prevented in the manner hitherto described.

When dairymen become alive to the fact that citizens demand pure, wholesome milk, and will receive no other, they will be prompt to supply the article demanded, and it is by such methods as those mentioned that this can be done.

It is desirable that cows now kept in the City of Milwaukee by dairymen, numbering at this time about 791, should be removed. They can not have the fresh air and exercise necessary to insure good health; many of the stables are wretched apologies for dairy stalls, and of course it is impossible for the animals to get the fresh grass and good pasturage so necessary for their welfare. The constant temptation to feed the animals on "vinegar slops" and "swill" is so great that some of the proprietors of such stables find it difficult to resist the temptation. Notwithstanding the efforts of this department to check this method of keeping and feeding cows, we know that it is done to some extent, but it should be stopped by proper legislation. To maintain the purity of the milk supply is, in my opinion, one of the most important matters coming within the province of the health department, and no effort or expense should be spared to secure, especially for infants and invalids,

pure, unadulterated milk. It is the intention of the department to continue the present methods, but we need another inspector to assist in carrying out this important work.

BAKERIES AND CANDY MANUFACTORIES.

Early in the year a systematic examination of the bakeries and candy manufacturing establishments was made.

The condition of affairs in many of these establishments was such that legislation seemed necessary to correct the evils discovered, and for the purpose of calling attention to the state of affairs the following communication was sent to your honorable body:

JUNE 22, 1896.

To the Honorable the Common Council of the City of Milwaukee:

Gentlemen—I have the honor to transmit herewith reports upon the condition of the bakeries and candy manufacturing establishments located in the City of Milwaukee. The names of the persons operating each is given, together with the street and number.

An examination of these reports reveals the fact that there are 247 bakeries, of this number but fifty-three are reported as "clean and in good condition; "seventy-two are reported as "filthy;" 114 as "medium clean," while eight have water closets in the same room, close to the mixing troughs.

In forty-two the flour stored for use was in rooms that are reported "damp and musty," while in one storage room a water closet was found.

Three of the storage rooms are reported "filthy."

In two of the bakeries, chicken roosts were found in the rooms where the bread is mixed.

In eleven the ventilation was found "very poor."

In one the sewer gas was "bad."

One hundred and thirty-four out of the 247 bakeries are located in basements, and it was in these basements that the majority of the "filthy" places were found.

Of the establishments devoted to the manufacture of candy, seven were found "clean and in good condition."

Five candy factories were found in a "filthy condition."

In one of those reported as filthy, there are five water closets in the same room where the candy is mixed.

In many of the bakeries, the conditions which are described as "filthy," are fully justified by the balance of the report. In one this language is used: "Bakery in basement; dark and dirty; has not air enough. Storage room for flour damp and musty. The whole basement is damp. Uses well water; well in rear of the house dirty; filthy water around the well, which runs back into

the well. They throw all their filthy water in the yard, as the slop hopper is broken. A regular nuisance."

From another report, we quote the following language:

"There is one bake oven in the middle of the east part fronting north; on the north wall of this part is a privy closet in a dirty, filthy condition. This part of the basement is used for the storage room for coal, molasses, empty barrels and rubbish."

From another:

"The bakery is in the rear part of a basement, a small, narrow place, dark and filthy. The dough trough is against a damp wall, with a privy closet about four feet away. I found them doing their family washing in this room."

From another report:

"In the rear of this bakery, on the wall, I found a chicken roost, with chickens, which had been kept there through the winter."

In another report:

"Privy closet in rear of bakery filthy; left orders to have it cleaned. I also found two chicken roosts with young chickens in this bakery; I left orders to have the same removed."

While another report reads:

"Bakery in basement very dirty and filthy; privy closets in rear of bakery filthy; sink and surroundings of sink filthy."

Quotations similar to those above given might be made from every one of the number reported as filthy, while those which are reported as "medium clean" are in many instances in a decidedly unsanitary condition.

In the majority of the bakeries reported as either filthy or medium clean, the conditions appear to be due to carelessness or indifference.

That such carelessness is found to exist among bakeries really indicates the necessity for some supervision, that those people who find it convenient to procure bread at the several bakeries may at least feel assured that it comes from places which are clean and in a sanitary condition. No one can read the reports herewith transmitted without being convinced that there is great necessity for a radical change in the manner of conducting the city bakeries and candy manufactories.

For the purpose of making provision for such an examination as is necessary to secure this change, I would respectfully present to your consideration a draft for an ordinance to provide for the inspection of bakeries and candy manufactories, and to prevent the manufacture and sale of unclean and unwholesome food.

All of which is respectfully submitted.

WALTER KEMPSTER, M. D.
Commissioner of Health.

Accompanying this communication was the draft of an ordinance which, after due consideration, was passed, and is now in force.

The following is a copy of a card printed in English and German, and distributed to every bakery and candy manufacturing establishment in the city:

BAKERS AND CANDY MANUFACTURERS.

TAKE NOTICE.

On the 17th day of August, 1896, the Common Council passed the following ordinance:

131—AN ORDINANCE to provide for the inspection of bakeries and candy manufactories, and to prevent the manufacture and sale of unclean and unwholesome food.

The Mayor and Common Council of the City of Milwaukee do ordain as follows:

Section 1. Any person or persons who shall bake or cook any bread or food made from cereals, or manufacture any candy within the City of Milwaukee, for the purpose of sale, shall keep and maintain the premises in which the same shall be baked or manufactured, and all utensils used in such business, in a clean and wholesome condition, under a penalty of not less than five dollars ($5.00), nor more than fifty dollars ($50.00), for each offense, and every day in which said premises and utensils shall be in an unclean or unwholesome condition shall be deemed to be a separate offense.

Section 2. Any premises and utensils used for baking or cooking any bread or food made from cereals, or manufacturing candy, shall be open to the inspection of the Commissioner of Health, or his assistants, at all hours, and any person or persons who shall refuse to permit such Commissioner of Health or his assistants to enter in and upon any such premises and make any such inspection, or who shall in any way obstruct or interfere with such inspection, shall be fined not less than five dollars ($5.00), nor more than fifty dollars ($50.00), for each and every offense.

Section 3. If any person shall sell, or expose for sale, any bread or food made from cereals, or any candy which is unclean or unwholesome, or which is baked, cooked or manufactured in any premises or utensils not in a clean and wholesome condition, he shall forfeit a penalty of not less than five dollars ($5.00), nor more than fifty dollars ($50.00), for each offense, and such bread, food or candy shall, without delay, upon the view of the Commissioner of Health, or any of his assistants, be seized or destroyed.

Section 4. This ordinance shall take effect and be in force from and after its passage and publication.

Passed August 17, 1896.

On the cards is the following:

Delivering bread, rolls, pies or cakes in a dirty wagon or covered with horse blankets, or otherwise handled in an unwholesome manner, will be treated as a violation of the ordinance.

Please hang this card in a place where all workmen may see it.

Very respectfully,

WALTER KEMPSTER, M. D.

Commissioner of Health.

Since the passage of this ordinance there has been great improvement in the condition of the establishments referred to; all the grosser evils complained of have been removed, and there has been very general acquiescence on the part of those interested to comply with the provisions of the ordinance. For several months after its passage a form of notification was used whenever an inspector found anything wrong on the premises. The form was as follows:

HEALTH DEPARTMENT—CITY HALL.

MILWAUKEE, ... 189...

M .....

.....

On the ..... day of .....189...,
Inspector No. ..... visited your.....
and found that the .....
....
....
....
....
which is contrary to the ordinance providing for the inspection of bakeries and candy manufactories.

In case of any further violation of said ordinance, proceedings will be instituted against you without further notice.

Yours very truly,

.....

Commissioner of Health.

The existence of the ordinance is now well known, and it is not thought necessary to send out this form of notification. Whenever any of these establishments are found untidy they are notified by the inspector to correct the matters complained of, and there has been a commendable disposition on the part

of the proprietors to comply, some persons having spent several hundred dollars in perfecting the establishments. The filthy places mentioned in the foregoing communication no longer exist. In some instances the proprietors have resisted the improvements, and occasionally seek to avoid the provisions of the ordinance. In one instance a baker was notified that his place of business was not kept according to the provisions of the ordinance. When he was informed of the delinquency and requested to clean the place, he refused to do so on the ground that nobody could interfere with his bakery. He was arrested, found guilty of disobeying an ordinance, fined $25.00 and costs, and now has a clean bakery.

In addition to the examination of milk and bread, it was thought necessary to examine ice used to cool drinking water and for the preservation of meats, etc.

This action became necessary because certain parties were found cutting and storing ice from the Kinnickinnic river, and also from the ponds which are made from the overflow of this river. The Kinnickinnic is the outlet for nearly all the sewers of the city, the water being extremely foul. An analysis of the ice showed it to be simply frozen sewage, containing large quantities of the materials known to produce disease. The analysis was as follows:

Nitrogen as Nitrites	0.004	per	100,000.
Nitrogen as Nitrates	6.600	"	"
Chlorides	0.7	"	"
Ammonia (free)	0.0027	"	"
Ammonia, Albuminoid	0.009	"	"
Oxidized matter (according to Smart's method)	0.5		
Total solids	19		
Loss on ignition	5		
Heavy blackening on ignition			

The number of colonies of bacteria in one cubic centimeter of this ice water was 6,648.

There is a public belief that when ice forms, all filth or living organisms are rendered inactive or "killed." This is not the fact. Organisms of various kinds, which can not be seen

by the unaided eye, remain within blocks of ice for a long period of time, and finally, when the ice thaws, the organisms become active, and are as dangerous as before being frozen.

Communications were sent to the several ice dealers, calling their attention to these facts, and requesting that those who were preparing to remove ice from the Kinnickinnic river and ponds stop their work. To this request there was general acquiescence, although some ice was removed and stored by dealers in spite of the request.

So many articles of food stored in refrigerators become impregnated with odors that it is a matter of common knowledge, and we found that when this ice was placed where it melted the odor of sewage was given off, and it was desirable to stop its use, if possible.

To check this evil a bill was passed by the State Legislature, and is known as Chapter 273 of the laws of 1897. Following is a copy:

Section 1. No person, firm, company or corporation shall sell, or offer for sale, or cause the same to be done within the State, for domestic, culinary or drinking purposes, any ice which contains mud, decayed vegetation or animal matter, foreign matter or malarial substance.

Section 2. All persons, firms, companies or corporations offering ice for sale, shall have posted on their wagons, in a conspicuous manner, the name of the place from which the ice so offered for sale was cut, harvested or manufactured, and all persons, firms, companies or corporations, dealing in or handling impure ice to be used for cooling purposes only, shall have their wagons so labeled.

Section 3. Whosoever violates the provisions of this act shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be punished by a fine of not less than fifty (50) dollars, or more than one hundred (100) dollars, or by imprisonment in the county jail not to exceed six months, or by both such fine and imprisonment.

Copies of this law have been distributed to the ice companies and to dealers generally, printed on cards which may be hung up.

It is a strange commentary on the cupidity of man that it should be necessary to provide laws to protect the people from the deleterious effect of adulterated or unwholesome materials which enter into food and drink, but the foregoing enumera-

tion indicates that the necessity does exist; and the experience of the department shows that the utmost vigilance is required to stop the sale of impure food, which is not only a menace, but an active source of danger to the health of all who use these articles.

While upon the subject of food, there is another matter to which I desire to call your attention.

It is the custom of those who sell fresh fruits, candies, vegetables, meats or fish, to expose them for sale in open boxes or other containers, upon the streets, exposed to the filthy dust which is blown upon them all day long; and it is common experience when one stops to inquire the price of nice looking cherries or berries for the salesman to dust them off with a brush. When one considers of what the dust of the street is composed, the fact that it settles down upon the soft, moist fruits is not appetizing. Dust from our streets is mainly made up of finely pulverized horse manure and other filthy materials finding lodgment there.

It is customary also for these same salespeople to place baskets of fruit, cabbages or other vegetables upon the walks, and it is by no means uncommon for dogs to urinate upon the baskets, or vegetables, a circumstance which I have noticed repeatedly, and have often spoken to the proprietors of the establishments, calling their attention to these facts, asking them to raise the fruit or vegetables from the walks upon stands, but it is not done.

If the people would take this matter into their own hands, and refuse to purchase any article of food which is thus exposed to the conditions enumerated above, it would soon bring it to an end. Every consideration of decency, to say nothing of healthfulness, requires that these exposures should be brought to an end. As a matter of fact, food thus exposed is extremely liable to convey disease germs to those who eat it, but whether it does or not the mere circumstance of the food having been exposed to such filth is disgusting in the extreme, and it would seem only necessary to call attention

to the fact to have it stopped, but unless the people demand it, the carelessness, and disgusting consequences will continue.

The foregoing observations are not exclusively those of persons connected with this office. Attention has been called by letter and otherwise to the facts enumerated. The more publicity there is given to this matter, the sooner the habit of exposing fruits, vegetables, etc., to the dust and other filth will come to an end.

AVOIDABLE NOISES.

I desire to call attention to the unnecessary noises occurring in this city.

The unavoidable noises are serious enough, and the majority of physicians can testify how disastrous harsh noises are to certain patients.

The growing army of nervous people is made more nervous by noises which are avoidable, and which are dangerous to health, increasing the various nervous symptoms which weaken the body and shorten life.

There are laws and ordinances relating to sanitation, which are wholesome and generally commended, but for some unaccountable reason no steps have yet been taken to stop the rivalry of those who wish to have the loudest steam whistle and blow it for the longest time, and they assume a very questionable right who thus deafen their fellow-citizens and carry dismay and distress into sick rooms, and may even shorten life by the useless shrieks.

There are some small steam tugs plying up and down our rivers, which carry steam whistles as large and noisy as the fog horns used on trans-Atlantic steamships, and which pierce the air with their deafening blasts at all hours of the day or night, distressing the sick and disturbing the well who wish to sleep.

It is no uncommon thing to hear a boat blow six long blasts on approaching a bridge during the night, all of which is wholly unnecessary, and positively harmful.

In sharp competition with the unearthly noises of the steamboat whistles are those on workshops and factories, some of which begin at 6 o'clock in the morning, and continue their shrieking at varying intervals until 6 o'clock at night.

Some are supposed to announce the hour of 7 a. m. Those who wish to take the time will find that this pandemonium generally lasts twenty minutes; that is, the whistles continue to shriek for that time from the beginning of the noise until it ceases.

The question arises, why should all these noises be permitted? It is not to call the work people to the shops, for they are already there. It is not necessary to announce the hour of noon, or quitting time in the evening by a ten or twenty minutes' blast upon a whistle loud enough to be heard in the next county. The workingmen all know the hour when they must commence, and when they must quit, without announcing it to them and all the rest of the citizens, by protracted, deafening shrieks.

So sharp has this rivalry become, that one large whistle is not now considered sufficient, and some place two or even three whistles, each having a different pitch or tone, side by side, so as to make the shriek as far-reaching and ear-splitting as possible.

Many years ago, when clocks and watches were in the possession of few people, there was a valid excuse for whistles blowing to denote the hour, but that time has long since passed; there is no excuse for it now.

If there is necessity for steam whistles, it is not necessary to use one loud enough to be heard all over the city, which carries distress wherever there are sick people, and disturbs thousands who are well.

Not only is this true of steamboats and manufacturing establishments, but the several railways entering into the city contribute their share to these unnecessary nuisances.

It may be proper for locomotives passing rapidly through the country to give notice of their approach by

blasts upon the whistle, but there can be no such necessity within the city limits where speed is restricted. In the "railway yards," during certain hours of the day and night, there is often a continuance of whistle-blowing, which should be restricted. This is done in some cities, and works no hardship.

Not long since, an engine standing upon a sidetrack in this city had its whistle opened, and blew one continuous blast, lasting thirty-five minutes. Such exhibitions can be of no practical value, and must be merely to gratify the whim or caprice of the person who did it.

We are accustomed to laugh at the acts of those "uncivilized" people who beat their drums and tom-toms whenever an eclipse appears, and speak of it as an act of barbarism, but in our highly civilized communities we tolerate a ten-thousand-fold worse noise every day, and the noise made is as useless here as it is there.

Whistle-blowing has become an unbearable nuisance, and should be checked, if not stopped. It would be setting a good example if the city would first take steps to stop the shrieks now made by the steam vessels in approaching the bridges.

Bridge tenders are employed to watch for the approach of boats, and can open the bridge just as well without the noise as after it has been made.

If the whistle must blow for the benefit of the bridge tender, it would be proper to prescribe the size. There is no necessity for the use of a whistle larger than those sometimes employed to signal the engineer on board the boat. The great fog horns, now used even on the smallest boats, should be forbidden, and such penalties prescribed as will secure cessation of these nuisances.

Of course, there will be objection; there is always objection to salutary legislation, but the great majority of our citizens will hail with delight the day when these terrible nuisances to both sick and well are stopped.

The ordinary, unavoidable noises of a large city are almost unendurable to the sick. The rattle of the ice

wagons, coal carts, drays, loose-jointed vehicles, the clank of street car gongs, the grating and grinding of street car motors, are all bad enough. Some of these might be checked, but above all these comes the shrill, long blast from steamboat, factory and railway whistles, which are unnecessary and injurious to life, making the sick writhe in agony, and the nervous more nervous.

SMOKE.

The ordinance regulating the discharge of black smoke takes effect January 1, 1898, and is as follows:

6—AN ORDINANCE to prohibit the emission of dense smoke from the smokestack of any boat or locomotive, or from any chimney within the limits of the City of Milwaukee.

The Mayor and Common Council of the City of Milwaukee do ordain as follows:

Section 1. The emission of dense smoke from the smokestack of any boat or locomotive, or from any chimney or smokestack anywhere within the limits of the City of Milwaukee shall, from and after the date when the provisions of this section shall take effect, be deemed and is hereby declared to be a nuisance; provided, that chimneys of buildings used exclusively for private residences shall not be deemed within the provisions of this ordinance.

Section 2. The owner or owners of any boat or locomotive engine, and the person or persons employed as engineer, or otherwise, in the working of the engine or engines in said boat, or in operating such locomotive, and the owner, lessee or occupant of any building who shall permit or allow dense smoke to issue or be emitted from the smokestack within the said limits, shall be deemed guilty of creating a nuisance, and shall for every such offense be fined not less than five dollars, nor more than fifty dollars, or punished by imprisonment in the House of Correction for not more than sixty days. Every day which said nuisance shall continue shall be deemed a separate offense.

Section 3. Hereafter, before approving plans and specifications for the erection of any business building or factory within the limits aforesaid, it shall be the duty of the Inspector of Buildings of the City of Milwaukee to see that proper provision is made in said plans and specifications to prevent the emission of dense smoke from the chimney of said building.

Section 4. It shall be the duty of the Commissioner of Health and the Chief of Police to cause section 2 of this ordinance to be enforced, and to cause complaint to be made against all persons violating the same.

Section 5. This ordinance shall take effect and be in force from and after the first day of January, A. D. 1898, except that the provisions of section 3 thereof shall be in force from and after its publication.

Passed February 3, 1896.

WILLIAM G. RAUSCHENBERGER,
President of the Common Council.
WILLIAM E. ANDERSON,
City Clerk.

Approved February 5, 1896.
JOHN C. KOCH,
Mayor.

Copies of this ordinance, enclosed in letters calling attention to it, have been mailed to all the large manufacturing establishments, and to railway and steamship agencies.

Frequent complaint is made by proprietors of establishments dealing in articles easily soiled, situated along the rivers, of the volumes of dense smoky soot emitted by the frequent passing tugs and other steam-craft.

In some cities situated along river banks, such boats are required to burn "hard coal," or some fuel which does not emit dense volumes of smoke, and it would be proper to require this in our city. The volume of smoke thrown out often creates a pecuniary loss to persons dealing in clothing, dry goods, or other articles impaired by the smudge.

In the struggle for gain and the exercise of so-called personal rights, it is sometimes the case that too little attention is paid to the rights of others, whose property is damaged, and who are imposed upon. It is necessary to provide penalties for those who disregard the rights of the many for their own profit.

To repress the noise and smoke nuisances, there is much to be done. I respectfully suggest to your honorable body that an ordinance be passed which will prevent the continuance of the nuisances above referred to.

WATER.

During the year arrangements have been perfected in the laboratory which enables us to analyze drinking water.

The water is obtained from faucets in different parts of the city, including school houses, public drinking fountains, stores, dwellings, etc., and analyzed. Each week a sample is furnished to us by the water department. The results of these analyses have been published from time to time in the monthly reports issued from this department, but, as the matter is of considerable importance, these results are introduced in tabular form in this report. The water from a number of wells located in different parts of the city has been analyzed, and in nearly every instance the well water is found contaminated to such an extent that it is unfit for drinking, and orders have been issued to close the wells in accordance with the provisions of Section 4 of Chapter 13 of the Charter of the City of Milwaukee, which is as follows:

Section 4. The Commissioner of Health shall give such directions, and adopt all such measures for cleaning and purifying all such buildings, lots and other places, and for causing the removal therefrom of any wells, cisterns, privy vaults, urinals, sinks, slop hoppers, defective plumbing, or any sewer connections, and of all noxious substances producing a disagreeable smell, or tending to cause sickness or disease, as in his opinion may be deemed necessary, and he may do or cause to be done whatever, in his judgment, shall be needful to carry out such measures for the preservation of the public health.

Most of the wells examined have supplied people in the neighborhood for many years, and, because of this fact, the owner infrequently demurs against having the well filled, because the water "looks clear." The source of the water supply in wells is not thought of. Many of the wells ordered closed are surrounded by privy vaults, livery stables, cow barns, etc., etc., and, in the process of time, the leakage from these places soaks through the soil, traveling long distances through cracks, sand, gravel, etc., under ground, and thus contaminating the well water. In one instance, the analyst, in making his report, said there must be a dead animal in the well, the contamination being so great. The well water came from premises located not far from one of our cemeteries, and the contamination of the water was unquestionably the result of

seepage from those grounds. In another instance, the water was found unfit for use; the owner then requested permission to have the well thoroughly cleaned out before it was filled, and he did so. A second examination of the water disclosed the same condition, and the owner, still doubting our examinations, sent the water to an analytical chemist, whose report tallied with our own, and the well was closed.

There is not an old well located in the populous part of the city of Milwaukee that is not more or less contaminated by the foul materials heretofore mentioned, and it is high time that all wells should be closed. The most dangerous centers of infection during the recent epidemic of cholera in Hamburg, Germany, were found to be the wells, and when they were closed by order of the government, the violence of the epidemic subsided.

Other diseases are known to be conveyed by germs finding their way into water.

Typhoid fever is one of the diseases which is known to be conveyed from place to place, or from family to family, by means of contaminated well water. Leaky sewers contaminate the wells, and a sewer into which are poured emanations from one case of typhoid fever may by its leaks contaminate many wells. In those cities having pure water there is a very low death rate from typhoid fever, while in cities having a contaminated supply of water there is a high typhoid fever rate, and a correspondingly high death rate.

John W. Hill, C. E., has recently been engaged in investigating this subject, both in Europe and the United States, and in an article read before a scientific association in Cincinnati, in the autumn of 1896, he says:

I will first direct your attention to the typhoid statistics of ten cities in Europe having what are known to be water supplies of excellent quality, and compare these with ten cities in this country having what are known to be water supplies of poor quality, and then let you decide whether it pays to supply a city with water which shall be the very best attainable by practical means.

The figures quoted are taken from the registers of vital statistics for the year 1895, and give deaths by typhoid fever, per 100,000 of population living:

UNITED STATES.		EUROPE.	
Chicago	32	Berlin	5
Cincinnati	36	Munich	3
Cleveland	36	Hamburg	9
Washington	74	The Hague	5
Pittsburgh	77	Rotterdam	2
Jersey City	71	Stockholm	9
Louisville	77	Christiania	7
Indianapolis	97	Vienna	6
Philadelphia	40	Dresden	5
Buffalo	29	Breslau	9
	59.9	Average	6

You will notice that the average rate for the cities in this country is nine and one-half times the average rate for the cities of Europe.

Comparing Rotterdam, the city on the list having the lowest rate, with Indianapolis, the city having the highest rate, it appears that the chances of taking and dying from typhoid fever during the past year was forty-seven and one-half times as great in Indianapolis as in the old City of Holland.

Now, something with reference to the kinds of water supplied by these several cities. Berlin draws its public water supply from the Lakes Muggel and Tegel, the former an enlargement of the River Spree, and the latter an enlargement of the River Havel. Hamburg draws its water from the River Elbe. Rotterdam draws its water from the River Maas (one of the mouths of the Rhine), but in each of these cities the water is carefully filtered and brought to a high fixed standard of purity before it is allowed to go into the public mains and reach the consumers. Munich obtains its water from mountain springs in the Mangfall Valley. Vienna obtains its water from mountain springs in the Sheenerg. The Hague draws its public water supply first from a system of driven wells, and afterwards filters it through beds of very fine dune sand. Stockholm draws its public water from lakes and wells. Dresden takes its water from a system of driven wells alongside the River Elbe, and Breslau uses filtered water from the River Oder. The source of supply for Christiania is unknown.

Of the American cities, the sources of supply for Chicago, Cleveland and Buffalo are lakes, into which millions of gallons of raw sewage is being poured every day, while Cincinnati, Philadelphia, Washington, Pittsburgh, Louisville, Indianapolis and Jersey City take their public water supplies from rivers which are the channels of discharge for the sewage of many cities. No attempt is made by any of these cities to remove the noxious properties from the water before it is delivered to the consumers.

In regard to the quality of water supplied to the people of certain cities of Europe, it should be manifest, if this was not to be used as a drinking

water, that a very large annual expense could be avoided in those cities by pumping water direct into the reservoirs or street mains from any convenient source without attempting in any manner an improvement in its quality before it is distributed to the consumers.

Water of high hygienic quality is not required for the sprinkling of the streets and lawns, for the extinguishment of fires, for the flushing of sanitary apparatus, for steam boilers, and many other uses, and if the water is not to be used for drinking and other dietetic purposes, great care and expense in the selection of a source of supply, or in efforts at improvement in the quality of water is surely wasted.

Considering that over 98 per cent. of the consumption of water by any large city is for purposes wholly unaffected by its hygienic quality, it would seem very singular, indeed, that a city like Berlin (for instance), should be at an extra expense of ten dollars per million gallons to fit the water for drinking purposes before a gallon of it is permitted to go into the public mains. This great cost of purification of the water from Lakes Muggel and Tegel is not necessary, if the water is to be used only for street sprinkling, or other purposes apart from drinking and the requirements of the cuisine. Moreover, the water from Lake Muggel, after it has passed through the filters at Frederichshagen, is chemically and bacterially as pure as many natural spring or deep well waters which are known to be altogether safe for drinking purposes, and chemically and bacterially pure, or nearly pure, waters are not needed for any of the many uses of water, excepting for drinking, cooking, and the washing of uncooked articles of diet. No one would propose an elaborate and expensive treatment of a polluted water unless some portion of it was to be drank.

The water of the River Elbe, when it reaches Hamburg, is of sufficient purity for all ordinary purposes, but the most modern works upon a large scale for the improvement of polluted waters have recently been devised by that city, and these works are carefully operated to reduce the noxious properties of the Elbe water before it is distributed to the citizens. This work of purification is not intended to make the water better for the great majority of uses to which it is applied, but to make it a water which the inhabitants can drink with the least risk of infection from typhoid fever and other water carried diseases. If it were a fact, as some are disposed to think, that the people of Hamburg do not drink water, why should that city be at such great effort and expense to render the water of the Elbe fit to drink before it is permitted to go to the consumers?

But the most pronounced efforts to procure a supply of public water which certainly shall not be the cause of infection, is found at The Hague, where the water is first obtained from the wells driven in the sand dunes, and afterwards passed though filters of sand, the grade of which is finer than that of nearly every other city which has adopted sand filteration. The water of The Hague, as it comes from the driven wells in the dunes, very likely is equal to that of any of the driven well waters, which we are accus-

tomed to drink with a feeling of perfect security. But the officials of that city, not content with a water which at its source is far superior to nearly all of our public waters, set about to improve the hygienic quality of this water by slow filteration through beds of fine sand, with the result that their city has had for many years nearly the lowest recorded typhoid fever rate of any of the large cities of the world.

In Chicago, the health department for two years past has made the examination of the water supplied to that city a feature, and has devoted much time, great care and consideration to the subject; the monthly reports from that city demonstrate that whenever the lake water is polluted by sewage contamination, there is an increase in the number of cases of typhoid fever and in the number of deaths. It is to prevent water contamination and to check typhoid fever that Chicago is now spending so many millions of dollars to improve the water supply. From the health reports received during the year 1896 it appears that there were 751 deaths from this disease in Chicago, which would make their percentage in each one hundred thousand of the population for the year 1896, 42.91.

Milwaukee has an exceptionally low death rate from typhoid fever, compared with the cities mentioned above in the United States, but its proportion is nearly twice as high as the three highest cities in Europe, viz.: Hamburg, Stockholm and Breslau. The deaths from typhoid fever, per one hundred thousand of the population, in the city of Milwaukee, for the years 1886 to 1896, inclusive, has been as follows:

1886	29.00	1892	34.08
1887	24.15	1893	40.95
1888	33.68	1894	29.05
1889	24.48	1895	25.20
1890	35.61	1896	17.69
1891	35.98		

Mr. Hill states in the article above referred to that "Nearly all the water supplies of the large cities of this country are polluted with household sewage, and are carriers of typhoid bacilli from the sick to the well. Having knowledge of the

fact that many of our large cities are drawing water for drinking and other purposes from sources of known sewage pollution, we look upon typhoid rates of such cities as the natural result of this indifference to one of the laws of health, viz., a pure drinking water."

In the course of his inquiries, Mr. Hill began an investigation as to whether the consumption of beer as a beverage had any relation to this subject. His investigation discloses facts not generally known. He found that in some of the larger cities of the United States the consumption of beer as a beverage is remarkable. In Boston, the consumption of beer in 1894 was sixty-five gallons per capita; Cincinnati, which has a high typhoid fever rate, drank eighty gallons per capita, while "Milwaukee, for the same year, reached the respectable figure of 105 gallons per capita." "Of the ten larger cities of the United States, the lowest per capita per annum consumption for the year 1894 was forty-six gallons, and the highest (Milwaukee) 105 gallons." "The amount of beer made and drank in the United States for 1894 allows nearly sixteen gallons for every man, woman and child for the whole population."

The statement has been made that in those countries where there is a large consumption of beer, the typhoid fever rate is less than in other cities, but this statement is not borne out by the facts.

It is a reproach upon the intelligence of a community that consents to the discharge of all its sewage filth into a lake, of what was originally pure, cold water, and then takes its supply of drinking water from within a short distance from the outlet of the sewers, and then expects the water to be pure. The time must soon come when the cities on our great lakes will be compelled to adopt systems of filtration, unless sewage disposal is provided for in some other way than by emptying it directly into the lake. It is time to stop making these superb reservoirs the receptacles of offal and sewage from hundreds

of thousands of people; to cease discharging into them a poison as fatal, but more insidious, than the so-called deadly poisons.

The great cities of Europe have already awakened to the dangers of sewage contamination, and have provided at enormous cost methods to protect themselves.

There is no reason why the death rate from typhoid fever in the larger cities of the United States should be many times greater than it is in cities of the Old World, especially when it is clearly within our reasonable opportunity to make that rate even less here than it is there.

The 133 reported cases and forty-six deaths from typhoid fever in Milwaukee during 1895, while much lower than other American cities mentioned, is altogether too great a number, located as we are, upon the banks of this magnificent lake, which should be protected from the pollution daily poured into its crystal waters.

The Pumping Station on Jones Island discharges an average of fifty-five million gallons of sewage into the lake every twenty-four hours out of the intercepting sewer alone, while the pumps at the flushing works discharge about four hundred and fifty million gallons into the river each twenty-four hours, sweeping out an enormous volume of filth into the lake, a never ending source of contamination.

During the latter part of the year 1896, arrangements were made for the inspection of premises on which cases of typhoid fever and other contagious diseases occurred, the form upon which returns are to be made by inspectors to the department being as follows:

No.....

HEALTH DEPARTMENT—CITY OF MILWAUKEE.

MILWAUKEE,.....189...

.....Inspector No.....

SIR—It having been reported by Dr. .....

that there is a case of .....in the house No. .....

.....occupied by.....

You will placard said house according to law, and at the same time, personally make a careful sanitary inspection of the premises, and report promptly in writing as below.

WALTER KEMPSTER, M. D.,
Commissioner of Health.

Walter Kempster, M. D., Commissioner of Health:

SIR—I have this day placarded the above premises, and find on inspection as follows:

Age.....M. F. .....M. S. .....kind of house.....
No. families.....No. adults..... No. children.....No. school children
..... Treatment..... Antitoxine..... City.....
Other ..... Water supply.....Milk supply.....
Surroundings..... Sewer connections.....
Date when physcian was called.....
Sanitary suggestions..... .....
....
.....

Inspector No.....

The results obtained to the close of the year show the general sanitary conditions of the premises upon which the disease mentioned occurred.

PUBLIC SCHOOLS.

During the year the public schools have been frequently examined by the sanitary inspectors, and the observations made by them at each visit have been reported to the department in writing. Wherever a defect has been found, it has also been reported to the Board of Public Works and the Superintendent of Schools.

The examinations by inspectors showed that there was:

Sewer gas in	34
Poor flushing apparatus in	12
Poor ventilation in	15
Bad roof conductor in	3
Decayed floor in	8
Poor floor in	5
Bad latrines in	14
Bad urinals in	10
Bad privy vault in	1
Bad basin in	2

Cups washed once a month in	1
Cups washed once in two weeks in	3
Cups washed once a week in	27
Cups washed twice a week in	6
Cups washed daily in	10
Towels changed once a week in	35
Towels changed twice a week in	8
Bad smell in	1
Damp floor in basement	4
Catch basin in yard bad in	2
Registers out of repair in	1
Leaks in illuminating gas pipe in	3
Stagnant water under school in	2
No. of schools inspected	48

The unsanitary conditions noted at some of the schools were such that thorough examination appeared necessary, and accordingly the physicians connected with the health department were assigned to the duty of making examinations into the hygienic conditions found in and about each school, basement, the out-buildings, if any, and play grounds.

The reports of these physicians have been transmitted to the School Board for their information, and this report, together with those of the inspectors, emphasizes the necessity for the appointment of an inspector of school sanitation, as was suggested to your Honorable Body in the annual report for 1895, page 15. The necessity for such an appointment cannot be doubted when the reports above referred to shall have been read.

The inspections made by the physicians show that notwithstanding the repairs made, among other things, in at least twenty-five schools, the ventilation is imperfect; in twelve is absolutely bad. That in twelve schools the heating is not what it should be; in a dozen or more the water closets are not in good condition; in nine they are reported as bad, the odor permeating the building to such an extent as to be clearly perceptible in the school rooms located upon the upper floors.

The report from the Ninth District Primary School shows that the building is unsuitable for school purposes in its pres-

ent condition, while the report concerning the Seventh District School shows that the only way to repair that school is to build a new one. Some of the schools are over-crowded, and the air is bad because ventilation is imperfect.

In a number of cases the investigations have shown that little attention is paid to sanitation. Of drinking cups, there are from four to six, for from fifty to eighty children to drink out of, and these are washed but once a week; towels for from forty to fifty children to use are changed once a week; while in some the arrangement of water closets is old-fashioned and unsanitary, the flushing apparatus being insufficient to keep the latrines cleansed; in others the flushing depends upon the supervision of the janitor, and they are sometimes neglected for a school day, and, being located in the basement, the odors from them create a nuisance throughout the entire school building.

Janitors are not ordinarily good sanitarians. There should be an official clothed with sufficient authority to enable him to cause sanitary defects to be corrected immediately; he should be a physician whose whole time should be devoted to the observation of the school houses and the scholars.

In the City of Cleveland, Ohio, there is a staff of twelve assistant physicians whose duty it is to keep constant supervision of the schools and of the pupils. It is not to be expected that these medical inspectors prescribe for the children; they examine the sanitary condition of all, and where a child complains of sickness, or the teacher has reason to believe that the child is sick, the matter is at once reported to the inspector, who, if he finds the child ailing, directs the pupil to return home until such time as he is well. The City of Boston has forty-nine physicians who daily make an examination of school children.

In a recent report from the health department of that city, we find that "This work has been in progress for fourteen months, and has demonstrated the fact that there are not only many cases of contagious diseases found in the schools which

require early recognition and removal, but that there are large numbers of school children whose illness and whose disposition by the teacher requires the decision of a competent physician.

During fourteen months 16,100 pupils were examined, 10,737 of whom were found to be ill, and 2,041 of these were found to be too ill to remain in school for the day, and were sent home. Seventy-seven cases of diphtheria were discovered, twenty-eight of scarlet fever, one hundred and sixteen of measles, thirty-three cases of whooping cough, forty-seven of mumps, and a large number of contagious skin diseases.

In this connection, it is proper to observe that the school building should be an object of special solicitude, and the standard of cleanliness should be as perfect as it is possible to make it. The floors should be swept once a day and scrubbed at least once in each week; all hand-rails, door knobs, desks, and, in fact, all surfaces which will not be injured by the application of water, should be washed thoroughly with an antiseptic solution; water closets, toilet and cloak rooms should receive more than ordinary care, while during the recess from Friday to Monday all rooms should be thoroughly aired by opening the windows. The arrangements for drinking water should be kept scrupulously clean, for the reason that the dangerous, contagious diseases, such as diphtheria and scarlet fever, may be transmitted more directly through the medium of the drinking cup than in almost any other way. If cups are used, their number should be increased very materially, and they should be thoroughly scalded, cleansed and wiped after each school day; preferably glasses should be used, for the joints of a tin cup make admirable nests for the generation of disease germs.

Children are proverbially careless; the teachers already overburdened with the onerous duties required of them cannot be expected to take charge of the sanitary conditions of the schools, even if they were all well informed upon the subject. This work should be done by some one who visits the school

from time to time for the express purpose of finding out the true sanitary conditions, and who should be clothed with authority sufficient to see that all sanitary defects are promptly and entirely removed.

The overcrowding of our schools shows the necessity for more school buildings. It is not necessary that the school should be palatial in its appointments. A plain building, thoroughly equipped, with practical methods for maintaining good sanitary conditions, is a far better school than one architecturally ornate, which is not provided with all that hygiene requires.

Sanitary inspectors of schools are to be found in several cities, and good results have followed their appointment. The greatest care should be exercised to prevent the introduction into schools of cases of contagious disease. One child may become a center of contagion resulting in many deaths; to obviate such disasters should be one of the great efforts in school sanitation.

DIPHTHERIA.

During the year there have been 919 cases of diphtheria reported to the health department, and 198 deaths, this being the lowest percentage of deaths since 1891, since which time systematic records have been kept in this department. In 1892 there were 1,193 cases, and 400 deaths, or 33.5 per cent.; in 1893 there were 620 cases, with 209 deaths, 33.7 per cent.; in 1894 there were 436 cases and 165 deaths, 37.8 per cent.; in 1895 there were 375 cases and 112 deaths, or 30 per cent.; in 1896, 919 cases, with 198 deaths, or 21.5 per cent.

The use of diphtheria antitoxine has brought about the reduced death rate. Physicians have become more familiar with the use of the remedy, and have a better knowledge of the tests used, which demonstrate the existence of true diphtheria. There are a few who, I regret to say, decline to use antitoxine; there are some, too, who will not use vaccine virus; those who thus decline do so in the face of overwhelming facts relating to

the use of these agencies. In every country where antitoxine has been used properly, there is the most abundant evidence at hand to demonstrate that the death rate from diphtheria has been largely reduced. In Chicago, where a vigorous policy has been pursued in an attempt to check the spread of diphtheria, the death rate was decreased 38 per cent., notwithstanding there was a decided increase in the percentage of cases reported.

During the year twenty-two cases of diphtheria have been admitted to the isolation hospital in this city, and with one exception, no case admitted there died; the exception was the case of a small child who died a few moments after admission, and to whom the antitoxine was not given. Every case excepting this one was treated with diphtheria antitoxine, and without a single unpleasant result, and several of the patients admitted were violently ill.

The beneficent action of the Common Council in providing for the gratuitous supply of antitoxine to those who are unable to purchase it has been demonstrated in many cases, and the continuance of this method is recommended.

The laboratory is equipped with the necessary apparatus for making examinations to demonstrate the existence of diphtheria bacillus, and methods are provided for physicians to send material taken from the throats of suspected cases, which is at once examined, and the results made known immediately upon determination. Since the equipment of the laboratory, seventy examinations have been made by Dr. Bennett, of which forty-one were found to contain the true diphtheria germ, and twenty-nine did not contain it.

The determination of the diphtheria germ is a matter of importance, because where it does not exist there is no necessity for isolating the patient and subjecting the family to the discomforts which this entails. The existence of the germ cannot be known without this examination, and as all appliances are furnished to physicians for obtaining the material required, there is no loss of time or expense to the family physi-

cian in getting the positive information of the existence or non-existence of the diphtheria germ.

In every case of contagious disease reported, an inspector is sent immediately to examine the hygienic conditions of the premises, the source of the water supply, connection with sewers, if any, the condition of the privy vault, and such other matters as relate to good sanitation. When the water used for drinking is obtained from wells, an analysis is made, and in four instances the well water was found to be unfit for use, and the wells were closed.

In addition to the ordinary sanitary inspection, tests were made of the plumbing, and in a number of instances the plumbing was defective, so that sewage gas found access to the houses.

CONSUMPTION.

The large number of deaths attributed to consumption, 335, during the year, gives additional emphasis to the fact that this is one of our most dangerous diseases, that it is contagious also no longer admits of doubt, the contagion being communicated as it is in nearly all other forms of contagious disease. Every possible precaution should be taken to prevent the spreading of the contagious element. There is no doubt that the disease is spread by means of the germs contained in dried sputum, and the efforts made to check the filthy habit of expectoration in all public places should meet with the hearty approval and indorsement of all those who consider the well being of their kind. The efforts of the Street Railway Company and other public carriers to check the dangerous habit of expectoration upon the floors, is worthy of all praise, but the fountain cannot rise higher than its source, and unless all the people approve the methods used for checking the extension of this disease, it will continue to claim a large number of victims annually; but the death rate can be reduced by systematic, painstaking effort to check its spread.

The deaths from other forms of disease do not call for special mention, with the exception of disease connected with the nervous system, 511 for the year; a large number of these were ascribed to "convulsions" occurring in infancy, and those convulsions were doubtless primarily due to disorders of the digestive system.

Of the deaths from zymotic diseases, the number is less this year than for any year since 1891, when they constituted 23.5 per cent. of the total deaths. For 1896 the percentage was 16.5 per cent. of the total deaths.

SMALLPOX.

There have been no cases of smallpox during the year, notwithstanding the disease has continued to exist in several places on this continent.

In the report for 1895, attention was called to the fact that there was no state law or city ordinance in force which gave to the city protection from the invasion of contagious diseases, and it was suggested to your Honorable Body that the existing ordinance relating to contagious diseases should be amended or repealed. This has not been done, and attention is again called to the fact that if cases of smallpox should reach this city from abroad, the health department has no authority to isolate the patients.

During the year the department has been notified of the arrival of immigrants upon ships infected with smallpox, and that the destination of some of the passengers was Milwaukee; one instance occurred in which the infection on ship board was serious, and six persons who had been exposed during the passage were en route to Milwaukee.

Under the instructions received from the City Attorney, in a communication dated April 11, 1896, and which was published in the last annual report of this department, I was informed that there was no authority to isolate patients or to

maintain quarantine during the period in which the disease was likely to appear.

This is an extremely important matter, and, in my judgment, such legislation should be had immediately as will enable the department to prevent infected immigrants or other persons, from bringing this disease into our city, where it may become epidemic, causing great loss of life, and the expenditure of large sums of money. This is the more important at this time, because under a recent decision of the Supreme Court of the State of Wisconsin, the department is not now able to exercise the ordinary precaution of vaccination, so that the citizens of Milwaukee are without protection of any kind, either by means of isolation, quarantine or vaccination.

The matter of vaccination is of such great importance that I desire to put on record the opinion of the Supreme Court of the State upon this subject, for the reason that the time will come when another epidemic will sweep throughout the city, unless measures are taken to prevent it, and I desire the responsibility located where it properly belongs.

STATE EX REL. ADAMS VS. BURDGE ET AL.—SCHOOL BOARD.

[Supreme Court of Wisconsin. February 23, 1897.]

Schools; Compulsory Vaccination of Children; Power of State Board of Health; Reasonableness of Rule; Police Power; Delegation of Legislative Power.

1. In the absence of a statute making vaccination compulsory, or a condition precedent to the right of children of proper qualifications to attend the public schools, a rule by the State Board of Health which was authorized to take general supervision over the public health (Rev. St., paragraph 1407), and to make regulations to preserve it (section 1408), and to guard against contagious diseases (Sanb. & B. Ann. St., pars. 1409a, 1409b), that no child shall be allowed to attend a public or private school within the State without presenting a certificate of vaccination, cannot be sustained as an exercise of police power.

2. Since the State Board of Health is merely an administrative body, Sanb. & B. Ann. St., pars. 1409b, 1409d, authorizing it to make such regulations "as may, in its judgment, be necessary for the protection of the people"

from contagious disease, and providing that contagious disease shall mean such "as the State Board of Health shall designate as contagious and dangerous to the public health," is an unwarranted delegation of legislative power.

3. A rule by the State Board of Health that no child shall be allowed to attend school in the State without presenting a certificate of vaccination, made when there was no epidemic of smallpox in the State, and when the board had no reasonable apprehension that the disease would become prevalent, or that the regulation was necessary to preserve public health, was unreasonable and void.

Appeal from Circuit Court, Rock County. John R. Bennett, Judge.

Petition by E. J. Adams for a writ of mandamus to R. J. Burdge and others, School Board of the City of Beloit. From a decree granting the writ respondent's appeal. Affirmed.

This was a proceeding against the School Board of the City of Beloit to obtain a peremptory mandamus commanding the defendants, as such board, to permit the relator's three children to attend the public schools in said city, from which it was alleged they had been wrongfully and unlawfully expelled March 13, 1894, and had been excluded therefrom ever since, without any legal excuse or authority, solely on the ground that they had not been vaccinated with virus, as a preventative of smallpox. The defendants justified said expulsion and prohibition of said children from attending school, for the reason that none of them had presented to the principal or teacher of the school to which they respectively belonged a certificate of a reputable physician that they had been successfully vaccinated with virus, in order to prevent them from having smallpox, and under and by virtue of a certain rule adopted by the State Board of Health, January 26, 1894, and a modified rule adopted June 1894, after the commencement of this proceeding. The rule professed, upon its face, to be made under section 1409b, Sanb. & B. Ann. St., and was as follows, namely:

Section 1. No child shall be allowed to be enrolled as a pupil in any public, private or parochial school in this State, or to attend any such school as a pupil without first presenting to the principal or teacher of the school in which he or she applies for enrollment or attendance the certificate of a reputable physician that he or she has been successfully vaccinated.

This rule, as amended, reads as follows:

Section 1. No child shall be allowed to be enrolled as a pupil in any public, private or parochial school, without first presenting to the pricipal or teacher of the school in which he applies for enrollment or attendance the certificate of a reputable physician, that he has been successfully vaccinated, or in lieu of such certificate of successful vaccination, a certificate from a reputable physician that such child has been vaccinated at least twice within a period of three months next preceding the date of such application; such latter certificate, however, shall be void after the expiration of one year from its date.

Section 2. No parent or guardian of any child shall allow such child to attend any public, private or parochial school in this State, and no principal or teacher of any such school shall allow a child to be enrolled as a pupil, or to attend such school, without the evidence of vaccination herein required.

This section, as amended, reads as follows:

Section 2. No parent or guardian of any child shall allow or permit such child to attend any public, private or parochial school in this State, and no principal or teacher of any such school shall allow a child to be enrolled as a pupil or attend such school as such, without the evidence of vaccination herein required, and it is hereby made the duty of the proper school authorities, in their respective localities, to enforce the foregoing rule.

It was alleged in the return, in substance, that said rules of the State Board of Health had been transmitted to the defendants, the Beloit School Board, with a request that the same should be enforced, and that said School Board passed a resolution by which it was provided that the Clerk be instructed to notify the Superintendent of the city schools of Beloit to require all school children to be vaccinated, who were so required to be under the order of the State Board of Health, or to show successful certificates of vaccination on or before March 12, 1894, and that notice was given to the teachers of the public schools, accordingly, that said rule must be enforced, etc.; that the relator's children had never been vaccinated, and he had at all times positively refused to allow them to be vaccinated, and that none of them had ever produced or presented to any principal or teacher of any public school of said city any certificate of successful vaccination, as required by said rule of said State Board of Health, and which by order of the Beloit Board of Health of Feb. 19, 1894, the Superintendent of the city schools was directed to enforce; and that they were, therefore, excluded from attending public schools. It was admitted that there was not an epidemic of smallpox in said city at the time of such exclusion, but it was alleged that there was great danger of that disease becoming epidemic in the city, though there was not any case of smallpox in the immediate vicinity of the homes or schools of said children. At the trial before the Circuit Court of Rock County, that Court found that said rules of January 26 were passed by the Board of Health, and a copy thereof transmitted by it to C. W. Merriman, Superintendent of the Public Schools of the City of Beloit, about February 6, 1894; that the schools of said city were public schools, organized and maintained at public expense by a system of taxation for the purpose of furnishing means of education to the resident children of the City of Beloit, Wis., between the ages of 4 and 20 years, free of charge; that the defendants were then acting as the School Board of the City of Beloit, and had in charge the management of said schools, and that on the 19th day of February, 1894, they passed a resolution directing the Superintendent of the City Schools to require all children to be vaccinated under said order, or to show certificates of successful vaccination on or before March 12, 1894; and that no child who would not comply with the same, and produce the proper certificate of successful vaccination

before March 12, 1894, should be allowed to attend any of the said schools after that date; that during the said months of January and February, 1894, there was an epidemic of smallpox existing within the State of Wisconsin, but that there were a few cases scattered throughout the State, and that there has been but one case in the City of Beloit, which has been duly and properly quarantined; that the relator was a resident, citizen and taxpayer of the City of Beloit, and had three minor children, named in the writ, of the proper school age, living with him and depending upon him for support and education; that they had been attending the public schools of the City of Beloit, in their proper grades, prior to the making of said resolution by the said defendant school board, and did so attend until about the 13th of March, 1894; that said relator refused to allow his children to be vaccinated, and said children refused to be vaccinated on account of their belief, as Christian Scientists, that the operation or treatment of vaccination was morally wrong, and that the laws of God permit no such operation or treatment, and that to permit it is a breaking of such laws; that said children were of sound bodily health, and entitled to attend such public school, unless debarred by their refusal to be vaccinated, and they were expelled by reason of such refusal, and thereafter were not allowed to attend school; that in June, 1894, the substitute rule was adopted, and at that time, and at the time of filing the petition, there was no epidemic of smallpox, nor any case of smallpox in or near said City of Beloit; that the Board of Education had no belief or apprehension that it was prevalent in Beloit, or approaching it; that none of the relator's children had been exposed in any manner to any case of smallpox or varioloid, and that there was no immediate present necessity for a rule compelling scholars to be vaccinated. It was further found that two of relator's children were within the ages prescribed for the compulsory education of children by chapter 187, Laws Wis., 1891. The Court granted a peremptory writ of mandamus, as prayed for, and gave judgment accordingly, and for costs and disbursements against the defendants, from which the defendants appealed.

John C. Rood and William Ruger, for appellants. Fethers, Jeffris & Fifield, for respondent.

PINNEY, J.—(After stating the facts). The legality of the action of the defendants, constituting the School Board of the City of Beloit, in expelling and excluding the relator's three children from the public schools in that city, which they were and had been respectively attending, and which they had a lawful right to attend, is attempted to be jusified by the rule adopted by the State Board of Health of January 26, 1894, and as modified in June, 1894, after this proceeding had been commenced. The defendants were acting only under the supposed authority of the rule of the State Board of Health, and this presents the question of the power of the board to adopt and cause such a rule to be enforced. By section 1407, Rev. St., the State Board of Health is vested with "a general supervision throughout the State of the interests of the health and life of citizens," and directed to make certain investigations,

and "voluntary, or when required, advise public boards or officers," in regard to divers matters affecting the public health. By section 1408 the board was "to have charge of all matters pertaining to quarantine," and might from time to time "make general or local rules and regulations for the preservation or improvement of the public health not inconsistent with law, or those prescribed by local authorities pursuant to law," and "all sheriffs, constables, police officers, and all other officers and employes of this State, are required to respect and enforce the same in every particular affecting their respective localities or duties." By sections 1409a and 1409b, Sanb. & B. Ann. St., an annual appropriation of $15,000 was made as a contingent fund, which might be used, under the conditions and restrictions of section 1409b, "to prevent the introduction of Asiatic cholera, smallpox, or other dangerous, contagious diseases into this State, or the suppression and control of such disease, if the same shall be found already existing within the State." By section 1409b, the State Board of Health, the more effectually to protect the public health, was authorized to establish such systems of inspection as, in its judgment, might be necessary to ascertain the presence of the infection of Asiatic cholera or other dangerous contagious diseases, and to put the same in force, and might, "from time to time make, alter, modify or revoke rules and regulations for guarding against the introduction of contagious diseases into the State; for the control and suppression thereof, if within the State; for the quarantine and disinfection of persons, localities, and things infected, or suspected of being infected, by such diseases; * * * for the proper sanitary care of jails, asylums, school houses, * * * and the premises connected therewith, * * * and may declare any and all of its rules in force within the whole State, or within any specified part thereof; * * * and in general, the State Board of Health shall have power, and it shall be its duty, to make such rules and regulations, and to take such measures as may, in its judgment, be necessary for the protection of the people of the State from Asiatic cholera, or other dangerous contagious diseases." By section 1409c, it is provided that "any person who shall neglect or refuse to obey the said rules and regulations, or who shall wilfully obstruct or hinder the execution thereof, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be punished for each offense by a fine of not less than $25, and not more than $500, or by imprisonment in any county jail for a period of not more than six months, or by both fine and imprisonment, in the discretion of the Court."

The police power of the State is relied on to support the rule in question. This power has been defined in varying language, but of substantially the same general import. "All laws for the protection of life, limb and health, for the quiet of the person, and for the security of property," fall within the general police powers of the government. "All persons and property are subjected to all necessary restraints and burdens, to secure the general comfort, health and prosperity of the State;" and it has been said that "it is co-extensive with self-protection, and is not inaptly termed 'the law of overruling

necessity.' It is that inherent and plenary power in the State which enables it to prohibit all things hurtful to the comfort and welfare of society." Tied. Lim. 2-5; Cooley, Const. Lim. 572; Redfield, C. J., in Thorpe v. Railroad Co., 27 Vt., 140; Town of Lakeview v. Rose Hill Cemetery Co., 70 Ill., 192; State v. Noyes, 47 Me., 189. As the police power imposes restrictions and burdens upon the natural and private rights of individuals, it necessarily depends upon the law for its support; and, although of comprehensive and far-reaching character, it is subject to constitutional restrictions, and, in general, it is the province of the law-making power to determine in what cases or upon what conditions this power may be exercised. As applied to the present case, the relator has a right, secured by statutory enactment, to have his children continue to attend the city schools in which they were respectively enrolled as pupils, and they, too, had a right to so attend such schools. Whether it be called a "right" or "privilege," canot be important, for in either view it was secured to the relator, and to his children as well, by the positive provisions of law, and was to be enjoyed upon such terms and under such conditions and restrictions as the law-making power, within constitutional limits, might impose. There is no statute in this State authorizing compulsory vaccination, nor any statute which requires vaccination as one of the conditions of the right or privilege of attending the public schools; and, in the absence of any such statute, we think it can not be maintained that the rule relied on is a valid exercise of the rightful powers of the State Board of Health. The State Board of Health is a creation of the statute, and has only such power as the statute confers. It has no common-law powers. To lawfully exclude the relator's children from the city schools for the cause relied on required such a change in the existing law as the Legislature alone could make—a change that should make vaccination of pupils compulsory, or at least, prescribe it as a condition of the right or privilege of attending the public schools generally, or during the occurrence of certain emergencies, or upon the happening of certain contingencies or conditions, in respect to the prevalence of smallpox. The powers of the State Board of Health, though quite general in terms, must be held to be limited to the enforcement of some statute relating to some particular condition or emergency in respect to the public health; and, although they are to be fairly and liberally construed, yet the statute does not, either expressly or by fair implication, authorize the board to enact a rule or regulation which would have the force of a law changing the statute in relation to the admission and the right of pupils of a proper school age to attend the public schools. The State Board of Health had no "legislative power," properly so-called, and none could be delegated to it. It is purely an "administrative body." The powers of the State government are vested in three departments—the legislative, to enact the laws; the executive, to execute them; and the judicial, to declare, construe and apply them. The Constitution (Article 4, par. 1), declares that "the legislative power shall be vested in a Senate and Assembly." That no part of the legislative power can be delegated by the Legislature to any other department or body, is a fundamental

principle of constitutional law, essential to the integrity and maintenance of the system of government established by the Constitution, and repeatedly recognized and asserted by the Courts.

In the recent case of Dowling v. Insurance Co., 92 Wis. 63, 65 N. W., 738, we had occasion to examine and apply this principle to an attempt to delegate the power, essentially legislative, to the Insurance Commissioner, to prepare, approve and adopt a so-called "standard fire insurance policy," the adoption of which would necessarily affect important changes in the law of fire insurance—a delegation of authority which would transfer bodily the legislative power on this subject to the Insurance Commissioner. We are satisfied that the conclusions there reached are correct, and sustained by numerous decisions of the highest Courts of the country, some of which were there cited.

The application of the views there expressed is, we think, decisive against the validity of the rule under consideration. The language of the statute (Sanb. & B. Ann. St., par. 1409b), is very general, and goes to the extent of authorizing the State Board of Health "to make such rules and regulations and to take such measures as may, in its judgment, be necessary for the protection of the people from Asiatic cholera, or other dangerous, contagious disease," and by section 1409d, it is declared that the term "dangerous and contagious diseases," as used in the act, "shall be construed and understood to mean such diseases as the State Board of Health shall designate as contagious and dangerous to the public health." The provisions of the statute import and include an absolute delegation of the legislative power over the entire subject here involved, and this, too, without any previous legislative provisions for compulsory vaccination, or as a condition of enrollment of children of proper school age as pupils in the public school, or of their right to attend such schools. Without any other legislative authority than the right thus conferred, the State Board of Health assumes the power to so far control the public schools of the State as to require "the proper school authorities, in their respective localities, to enforce the rule in question." It cannot be doubted but that under appropriate general provisions of law, in relation to the prevention and suppression of dangerous and contagious diseases, authority may be conferred by the Legislature upon the State Board of Health, or local boards, to make reasonable rules and regulations for carrying into effect such general provisions, which will be valid, and may be enforced accordingly. The making of such rules and regulations is an administrative function, and not a legislative power, but there must first be some substantive provision of law to be administered and carried into effect. The true test and distinction whether a power is strictly legislative, or whether it is administrative, and merely relates to the execution of the statute law, "is between the delegation of power to make the law, which necessarily involves a discretion as to what it shall be, and conferring authority or discretion as to its execution, to be exercised under and in pursuance of the law." The first cannot be done. To the latter no valid objection can be made. Per Ranney, J., in Cincinnati, W. & Z. Ry. Co. vs. Commissioners of Clinton Co., 1 Ohio St., 88.

The same conclusions substantially were reached in Field v. Clark, 143 U. S. 650, 681, 694, 12 Sup. Ct., 495. When an act is clothed with all the forms of law, and is complete in and of itself, it may be provided that it shall become operative only upon some certain act or event, or, in like manner, that its operation shall be suspended; and the fact of such act or event, in either case, may be made to depend upon the ascertainment of it by some other department, body or officer, which is essentially an administrative act. There need, therefore, be no delay or embarrassment in such cases, as the Legislature may easily so formulate the act as to adapt it, and make it operative upon any contingency or emergency. Locke's Appeal 72 Pa. St., 491-498; Moers v. City of Reading, 21 Pa. St., 202; Blanding v. Burr, 13 Cal., 358. In the present instance neither method or legislation was adopted, and the fatal vice of the rule, in our judgment, is that there was no precedent or existing law under which it could be framed and adopted as an adjunct, or act of administrative authority, to effectuate its purposes and carry it into effect. School Directors v. Breen, 60 Ill. App., 201, the cases of Abeel v. Clark, 84 Cal., 226, 24 Pac., 383, and Bissell v. Davison, 65 Conn., 183, 32 Atl., 348, were sustained by ample legislative authority. In the case of Duffield v. School Dist., 162 Pa. St., 476, 29 Atl., 742, the authority to exclude from the schools those who had not been vaccinated, rested upon an ordinance of the city, but whether there was precedent legislative authority does not appear. The making of such rules and regulations to carry into effect the provisions of an act of strictly legislative authority, as was said in Re Griner, 16 Wis., 423, "no more partakes of legislative power than that discretionary authority intrusted to every department of the government in a variety of cases. This practice of giving discretionary power to other departments or agencies, who were intrusted with the duty of carrying into effect some general provisions of law, had its origin at the adoption of the Constitution, and in the action of the first Congress under it, as the federal legislation abundantly shows. * * * But a distinction must be made of those important subjects which must be entirely regulated by the Legislature itself from those of less interest in which a general provision may be made. * * * The line has not been exactly drawn which separates those important subjects which must be entirely regulated by the Legislature itself from those of less interest in which a general provision may be made, and power given to those who are to act under such general provisions to fill up the details." It not infrequently occurs that provisions are found in legislative enactments which might well have been determined and regulated by some board or body having administrative powers, but it is safe to say, we think, that where the provision in question lies strictly and solely within the domain of legislative authority, in all such cases there can be no delegation of the power to enact it. Our conclusion is that the rule under consideration could be made operative only as an act of legislative power, and it does not come within the domain of the power to make rules and regulations in aid or execution of some general statutory provision. This view is illustrated by reference to certain of the general provisions contained in section 1409b, yet of a sufficiently different character, so that the State Board of Health, as an

administrative body, might be authorized to adopt reasonable rules and regulations to carry them into effect. As to the matter of inspections authorized by the act, to ascertain the presence of the infection of Asiatic cholera or other dangerous and contagious diseases, and the power conferred on the Inspector to enter any building, vessel, railway car, etc., as well as the quarantine authorized by section 1409, the power of the State Board of Health to make appropriate rules and regulations to effectuate the general purposes thus declared would seem to be free from doubt. Hurst v. Warner (Mich.) 60 N. W., 440; Train v. Disinfecting Co., 144 Mass., 523-531, 11 N. E. 929; Health Dept. v. Knoll, 70 N. Y., 535.

2. The Circuit Court held that the rule in question was unreasonable, and, therefore, void; and, had the State Board of Health possessed the power to make the rule, we agree it would have been void for that reason. The rule was an unreasonable and extraordinary one, and serves to enforce the importance and necessity of a strict adherence to constitutional law; that the power to make the law cannot be delegated to any board or body not directly responsible to the people. When the rule in its original form was adopted, there was no epidemic of smallpox existing in the State, but there were a few cases scattered throughout the State. There had been but one case in Beloit, which had been properly quarantined; and when the substituted rule was adopted, in June, 1894, as well as when this proceeding was instituted, there was no epidemic of smallpox in or near the City of Beloit, or approaching it, and the defendant Board of Education had no belief or apprehension that it was prevalent in Beloit or approaching it. None of the relator's children had been exposed to it, or varioloid, and there was no immediate necessity for the rule requiring scholars to be vaccinated. All these facts are established by the findings of the Court, the correctness of which was not questioned at the argument; and yet, by an arbitrary rule, as by a single stroke of the pen, every child of school age throughout the entire State that had not been vaccinated, was excluded from the common schools, and forbidden to be enrolled as a pupil, or to attend school, without a certificate of successful vaccination from a reputable physician, or, in lieu thereof, a certificate showing that such child had been vaccinated twice within a period of three months next preceding its application for admission. There must be, at least, circumstances apparently rendering such a rule or regulation necessary for the preservation of the public health. It would be a very extraordinary condition that would justify such a sweeping and far-reaching exercise of power to make a rule of the character of the one in question either justifiable or proper, as the statute provides for making rules and regulations of local application only. Whether rules and regulations framed by an administrative body are reasonable or not is a question that may be determined in the Courts, and were there no other question in regard to the validity of this rule, we should feel compelled to declare it void, as unreasonable and unnecessary. Town of Kosciusko v. Slomberg (Miss.) 9 South., 297; In re Smith (N. Y. App.) 40 N. E., 497-499; School Directors v. Breen, 60 Ill. App., 201-208.

The question as to the validity of legislation making vaccination of children attending school compulsory is not presented by the record, and in respect to it we express no opinion. Two of the relator's children affected by the rule of exclusion are within the age prescribed for compulsory education of children by chapter 187, Laws Wis., 1891; but, as this objection may be obviated by subsequent legislation, there is no occasion now to express any opinion in respect to it.

It follows from these views that the judgment of the Circuit Court is correct. The judgment of the Circuit Court is affirmed.

Immediately after the receipt of this opinion, I addressed the following communication to the Chairman of the Committee on Public Health and Sanitation of the Legislature, and also to the Secretary of the State Board of Health, and had two personal conferences with members of the Committee on Public Health and Sanitation of the Legislature, requesting that action should be taken providing for vaccination. I was informed that two bills were introduced into the Legislature making provision for vaccination, neither one of which became a law. We are without the protective power of vaccination, and without legislation of any kind; and in this respect, I believe Wisconsin to be the only State in the civilized world so situated.

MILWAUKEE, April 12, 1897.

Hon. J. A. Clason, Assembly Chamber, Madison, Wis.:

DEAR SIR—Allow me to trespass for a few moments upon your valuable time. That you may clearly understand the situation of affairs which, in the full occupation of your time with the many matters now engrossing you, you may not have thought about.

A recent decision of the Supreme Court of the State of Wisconsin has been given, which states that the State Board of Health has no authority to make regulations requiring vaccination of children before attending public schools.

The several bills introduced during the present session, providing for the vaccination of children, have been indefinitely postponed, so that to-day there is no law, rule or requirement in this State providing for the vaccination of children before attending public schools.

It is, of course, unnecessary to state to you the absolute necessity that exists of some such regulation to be established if we are to keep smallpox out of this State, but, as affairs now stand, there is nothing to prevent the introduction of this disease, and its rapid extension throughout the State, if once it should obtain a foothold.

Statistics of the diseases which occurred in this city show conclusively the value of vaccination as a prophylactic; and if you are interested in the matter, you will find by looking up the statistical data that there has been an epidemic of smallpox in the State of Wisconsin in each of the following years: 1846, 1868, 1871, 1876; and, although, since that time up to 1894, there had been no epidemic, a few cases have occurred in the following years: 1881, 1882, 1883, 1884, 1885, 1887, 1889, 1890, 1892 and 1893. We may reasonably expect that the same ratio may be expected to occur in the future.

If no law or regulation is established making vaccination compulsory before a child enters a public school, we may eventually expect that there will be a largely increased number of cases of smallpox during the next epidemic, and, of course, a greater number of deaths. It is a very serious matter, and I appeal to you as a physician to ask yourself whether the profession throughout the State, if they understood this matter, would be satisfied if no effort is made to secure some regulation having in view the vaccination of children.

The facts here presented are not generally understood by the profession, or by the laity, and it is because of this fact that I believe it to be my duty, at the risk of intruding upon your time, to call your attention to the facts as they exist.

Should you require any further information about this subject, I shall be glad to respond.

Asking you to give this matter your serious attention, I have the honor to be Very respectfully yours,

WALTER KEMPSTER, M. D.,
Commissioner of Health.

The apathy manifested concerning this matter is alarming, the errors existing should be immediately corrected, and unless this is done our citizens will be rudely awakened at some time when they least expect it, and we shall have another epidemic upon us before which we shall be powerless, and which will be likely to result in hasty legislation, and perhaps, gross injustice to both sick and well. That there may be no mistake in my meaning I most earnestly press this matter upon the attention of your Honorable Body for such legislation as you are able to afford for the protection of the citizens; it is one of the most important that can come before you. If your legislation is prudent hundreds may be saved from death; as we are now situated, should an epidemic of any contagious diseases strike us, hundreds may be condemned to death. It is because

of this fact that I feel called upon to press this matter upon your attention, and to urge upon your Honorable Body the necessity for immediate action.

DISPOSAL OF GARBAGE.

During the year we have had a continuance of the complaints concerning the non-collection of garbage, to which your attention has been called in former reports. The complaints are most numerous and emphatic during the summer months, because at this time decomposition is active, and the material becomes a positive nuisance.

The whole time of one of the inspectors of this department is occupied in looking up the delinquencies of the collectors and endeavoring to secure prompt and efficient collection, but the complaints are so numerous that it has been impossible for one man to cover the territory, the complaints coming from all parts of the city, central and remote.

It is hoped that when a new contract shall be entered into, provision will be made to check this evil. The carelessness of collectors can be corrected by providing that for neglect or refusal to collect the garbage in the proper manner, and as often as required by the contract, a certain sum of money shall be deducted from the monthly payments due to the contractors. This penalty will secure good collection, by making both the contractors and the collectors more zealous in their work.

In July, 1896, there was reason to believe that the garbage collected and taken by the boat to the reduction works was not being treated by the Merz process according to the terms of the contract, but instead a portion was being thrown into the lake. Steps were immediately taken to ascertain the facts, and it was found that some persons, presumably connected with the establishment at Mequon, were dumping garbage from the cars into the lake, and that this was done during the night

time. After conference with his honor, the Mayor, on this subject, the following communication was transmitted to your Honorable Body:

OFFICE OF THE COMMISSIONER OF HEALTH.

MILWAUKEE, WIS., August 17, 1896.

To the Honorable the Common Council of the City of Milwaukee:

Gentlemen—It becomes my duty to acquaint you with certain facts concerning the disposition of garbage by the Wisconsin Rendering Company.

That you may fully understand the situation, I will first quote a paragraph from the contract now in force between the Wisconsin Rendering Company, party of the first part, and the City of Milwaukee, party of the second part, to-wit:

The said party of the first part further covenants and agrees, to and with the said party of the second part, that he will erect in said county of Ozaukee, on land owned or leased by him, a first-class plant, including the necessary buildings, apparatus and machinery for the reduction and conversion of slops, offal, garbage, dead animals and animal matter, into merchantable products by means of what is known as the Merz system or process; said plant to have capacity sufficient and ample to promptly and daily dispose of all slops, offal, garbage, dead animals and animal matter, which shall be collected by said party of the first part in said City of Milwaukee, said plant to be equal in capacity, and of such greater capacity as may from time to time be necessary." * * * "Said party of the first part to run all liquids of whatever kind from said works into and through sand filters before discharging the same into Lake Michigan, or purify the same by some other process satisfactory to the City Engineer of said city, etc." * * * "It is further stipulated that within ten days after the signing and sealing of this agreement by the respective parties thereto, that said party of the first part will make, execute and file with the City Clerk of Milwaukee a good and sufficient bond to said City of Milwaukee, in the penal sum of fifty thousand dollars ($50,000), with sureties to be approved by the Mayor of said city for the faithful performance of each and every covenant of this agreement, on his part to be kept and performed."

The bond, which is now on file in the office of the City Clerk, is dated March 22, 1892, and provides, among other things, that the parties mentioned therein "would collect all slops, offal, garbage, dead animals and animal matter in the City of Milwaukee," and transport the same to the garbage plant at Mequon, "and there promptly and daily dispose of the same in a sanitary manner by the Merz process."

The bond is signed by Henry A. Fleischmann, F. E. Gross and Charles Polacheck, and was approved on the same day by the Hon. Peter Somers, then Mayor of the city.

For the performance of this work, the City of Milwaukee pays each month the sum of $6,333.33, in accordance with the terms of the contract.

which, as above stated, requires all garbage, offal, dead animals, etc., to be treated in a sanitary manner by the Merz system.

Certain facts came to my knowledge which led me to conclude that the Wisconsin Rendering Company were not disposing of the garbage in accordance with the terms of the contract, but I could get no direct evidence until the 5th day of August, 1896, when I had proofs that a considerable quantity of garbage, which is collected in this city and taken to the works at Mequon, is dumped into the lake during the night.

On the 1st day of August, 1896, between 8 and 9 o'clock p. m., twelve tram carloads of garbage were emptied into the lake from the pier connected with the garbage plant. Again on Monday, August 3, Tuesday, August 4, and Wednesday, August 5, between the hours of 7 and 9 p. m., on each of the above mentioned days, there were twelve tram car loads of garbage dumped into the lake from the pier; so that between Saturday, August 1, and Wednesday night, August 5, there were forty-eight tram car loads of garbage, dead animals and offal, just as it is collected from the city, emptied into Lake Michigan at the foot of the works thirteen miles north of the city.

Indications found along the shore line of the lake, extending each way from the plant, show that a large quantity of garbage, offal, etc., has been cast up upon the beach, and may there be seen at this time, partly covered with sand, additional quantities being washed up after each storm from the east and northeast.

It has been customary to send a health officer on the boat which takes the garbage from Milwaukee to the works at Mequon to see that the material is not thrown overboard while on its way to Mequon, but it is after the garbage boat returns to Milwaukee that the contents of the tram cars are run out upon the pier and emptied into the lake as above mentioned.

I have had frequent conversations with Mr. F. C. Gross, President of the Wisconsin Rendering Company, relative to the capacity of the works at Mequon to dispose of the garbage in the manner contemplated in the contract, and he has at each conversation assured me that the works had sufficient capacity to treat greater quantities than the city furnished at this time.

I have communicated the facts above mentioned to Mr. Gross, and he has promised me that no more garbage should be dumped into the lake, but the proceeding is such a flagrant violation of the terms of the contract, that I laid the whole matter before his honor the Mayor, and after advising with him relative to the subject, concluded that it was my duty to lay the matter before your honorable body for such action as you may think proper to take.

I would respectfully suggest, however, that the Commissioner of Health be authorized to appoint an officer whose duty it shall be to stay continually at the works at Mequon to see that the garbage is disposed of in the manner set forth in the contract.

Since discovering that the garbage has been emptied into the lake, I have caused regular and systematic chemical examinations to be made of the

water which was drawn from the tap in the laboratory in the city hall, after permitting the water to run therefrom for a considerable time.

Five examinations made have in each instance demonstrated the existence of materials considered dangerous to health, and show conclusively that the water is contaminated and not fit for drinking purposes until it shall have been boiled.

It may be difficult to prove that the material found comes from the garbage thrown into the lake, but it is a well understood fact that this material is always found when large quantities of vegetable and animal matter undergo decomposition in water.

Therefore, I believe it to be my duty to recommend all persons to boil the water for thirty minutes before it is used to drink.

Respectfully submitted,

WALTER KEMPSTER,
Commissioner of Health.

Prior to this time the garbage floor of the plant at Mequon had been kept practically clear from accumulation of garbage. To be certain that all garbage was treated according to the terms of the contract, a sanitary inspector was stationed at the plant to see what was done with it; immediately after he reached the plant the accumulations of garbage became so great that large quantities of this material was hauled by teams and scattered on farming land adjacent to the plant, and this continued during the months of August and September, 1896. As this was a clear violation of the terms of the contract, I declined to audit the bills presented by the Rendering Company for the transportation and disposal of the garbage, and continued to decline until your Honorable Body authorized all bills due the Rendering Company to be paid, except the sum of $2,750, charged in the bill for the month of August, 1896, as provided for by a resolution passed on the 12th day of October, 1896, which sum was deducted, and has not yet been paid.

During the month of November, 1896, the Rendering Company made some additions to the capacity of the plant, so that they were afterwards able to dispose of the garbage.

To prevent dumping more of the garbage into the lake, a gate was placed across the tracks at the works at Mequon,

according to a resolution passed by your Honorable Body on the 12th day of October, 1896, which reads as follows:

Resolved, That the Commissioner of Health be, and he is hereby authorized and requested to audit all bills, now or hereafter to become due, of the Wisconsin Rendering Company, under its contract with the city for the collection, removal and disposition of garbage, except the amount claimed to be due by said company for the reduction of said garbage from July 27 to August 27, 1896.

Thereafter all loaded cars were drawn within the gate, when it was locked by the sanitary inspector, who alone retained the key, and this method has been continued to the present time. An inspector is required to go with the loaded boat from the dock in this city to the works at Mequon to prevent the garbage from being thrown overboard, and to see that all loaded cars are drawn within the gate.

The whole method of loading garbage upon the boat in this city, and unloading it at Mequon is unbusiness-like, disgusting and unsanitary in every respect, much of the slops found in garbage run into the lake either at the dock in this city, while the material is being loaded, or else at the pier at Mequon during the unloading process.

The attention of the company has been repeatedly called to this matter, but they have declined and refused to make any change. When the new contract shall have been drawn provisions should be made to improve the methods now in use.

"MEDICAL COLLEGES."

Within the year two so-called "medical colleges," located in the City of Milwaukee have been closed.

In December, 1895, it was learned that advertisements were being sent from this city to other cities in the United States, also to foreign countries, calling attention to the advantages possessed by the "colleges" located here, and offering special inducements for students of medicine and dentistry to correspond with the proprietors relative to "diplomas" issued by these so-called "colleges."

It was ascertained, also, that a person could secure a "diploma" upon the payment of a sum of money, and that no instruction of any kind was required or given at the "college;" that "diplomas" were sold to any one who had money to pay for them. This fact being established, the whole subject was referred to the Attorney General of the State, who came to Milwaukee and made a personal investigation of one so-called "college." The Attorney General found that there were no appliances in the "college," which, in fact, was a small room about twelve feet square, containing a table, on which was a large pile of circulars; that there was no faculty of any kind, no one connected with the "college" except the proprietor and his wife. There was no book containing a list of students, nor had they a list of the "graduates" from the "college." The proprietor said he had students, but gave no instruction at the "college," as this was unnecessary; that he submitted certain questions in writing, which if answered and sworn to, a "diploma" was conferred.

Withdrawn 1942

The questions mentioned were sent by the proprietor to any one who asked for them. The investigation disclosed a fraud, and the Attorney General asked the Supreme Court of the State for authority to begin proceedings to annul the charter, which had been obtained by fraudulent representations. When this application was made, the proprietor left Milwaukee, and opened "A Correspondence Bureau" in Chicago, and communications were sent out from that place, the circulars informing persons that the "college" was located in Milwaukee. This was the so-called "Wisconsin Eclectic Medical College."

The United States postal authorities were informed of the facts, and an official connected with the postoffice department investigated all the circumstances. His investigation led the United States postal authorities to authorize the arrest of the proprietor of this "college" for violation of the United States postal laws, and the arrest followed. An order to annul the

charter was obtained, and the case will be heard in the courts shortly.

Meantime, another "college" was opened in Milwaukee, having the same general features, but located in another part of the city. The proprietor of this "college" sent circulars abroad, and the health department received from foreign cities many inquiries concerning the standing of the "Milwaukee University and School of Dentistry."

The correspondence disclosed the fact that "diplomas" had been purchased by persons residing abroad, and who had never lived in this country. One dentist came to Milwaukee from a German city to obtain a "diploma," and this person was referred to the health department by the German Vice-Consul resident here, and was much chagrined and astonished when informed that the whole concern was a fraud.

The Attorney General of the State made an investigation of this so-called "college," and found at the place a person who represented himself as "Dean" of the "dental faculty," who admitted to the Attorney General that there were no records kept of the meetings of the "Board of Directors;" that there were no by-laws, or any means taken to preserve the records of any of the acts or doings of the "Board of Directors" or the "Faculty."

The investigation showed that the "Milwaukee University" did not own or possess any appliances or equipment for the teaching of medicine, surgery or dentistry, and the so-called "Dean" admitted to the Attorney General that a large number of "diplomas" had been issued to parties residing in Germany; that the sum received for each "diploma" was $200, together with notarial fees required to furnish the person with certified copies of the "articles of association and certificate of organization."

The "Dean" further admitted that he was not a graduate of any medical school, and had never received any authority to practice medicine, but that he had a diploma authorizing

him to practice dental surgery, but he was unable to produce it. The result of the examination led the Attorney General to the conclusion that "said Milwaukee University has never prepared or educated, or intended to prepare or educate, any person or persons for the purpose of enabling them to practice as reputable physicians or dentists, or for the purpose of conferring upon them, after due examination, the degree of doctor of medicine, or any other degree, according to their knowledge, as exhibited on such examination; and that said corporation was not organized in good faith, but was knowingly and willfully organized for the purpose of issuing diplomas in order to enable unfit and unskilled persons to practice medicine, and to enable the organizers and promoters of said Milwaukee University to secure large sums of money for false and fraudulent diplomas, not only from the innocent and unsuspecting, but from ignorant and corrupt persons who desired the pretended authority to practice medicine for their own selfish purposes."

Pending these investigations, the proprietor of this establishment threatened to bring a law suit against the City of Milwaukee for belittling the standard of the "college," and also threatened to commence legal proceedings against a leading daily newspaper for publishing an account of the investigations made, but when the Attorney General of the State secured the necessary authority from the Supreme Court to close up the concern, the proprietor fled from the city to avoid arrest.

Several persons having secured "diplomas" from these so-called "colleges," requested to have them registered in this department, and the request was at once refused, but, notwithstanding this, some persons having these "diplomas" opened offices and professed to be regular graduates of medicine, and advertised themselves as such.

The proprietors of both institutions had obtained from the Secretary of State a charter, enabling them to establish a med-

ical college. The ease with which a charter may be obtained for such purposes clearly indicates the necessity for more stringent legislation to prevent charters being obtained for the establishment of medical colleges or similar institutions.

The United States Inspector, who had investigated a number of postal money orders received by one of these so-called "colleges," stated that he had obtained information from postoffices located in the majority of the states that these diplomas had been received at their postoffices, and the sums of money received from the sale of "diplomas" aggregated in one year nearly $50,000.

Letters have been received from holders of these "diplomas" residing in various states, asking whether they could practice medicine and surgery in the State of Wisconsin if they should decide to locate here, and appeared to think it a hardship when told that the institutions were frauds and the "diplomas" could not be recognized.

Such frauds not only bring discredit upon the members of the medical profession at large, but dishonor the fair name of our state and city.

PUBLIC WATER CLOSETS.

There is need for public water closets in certain parts of the city. Great physical suffering and disease follow lack of attention to nature's demands.

In the case of men, a hotel or saloon, barn or obscure alley, afford opportunity for relief, but women cannot avail themselves of such places, consequently they are often compelled to suffer pain and disease because public water closets are not provided; they have long been regarded as public necessities, and they should be provided at once.

ANALYSIS OF FOOD.

The establishment of a laboratory designed to meet the demands of this large and growing city, made it necessary to

secure the services of a competent chemist and bacteriologist to make analyses of food, milk, water and other materials, also to make bacteriological examinations for the physicians of the city.

Application was made to your Honorable Body for the necessary authority, and by a resolution dated June 22, 1896, authority was given to appoint a "Food Analyst," as other city employes are obtained. On July 22, the Secretary of the Board of Civil Service Examiners sent the names of three persons who had passed the required examination. Dr. W. C. Bennett, being the first on the list, received the appointment, and has since that time been in charge of the laboratory work.

His report submitted herewith will show the extent and character of the work done by him or under his observation.

The work now performed in our laboratory can not be done by one person, and each week adds to the labor already done there. An assistant should be supplied to the chemist, and his services would be required during every day in the year. It is simply impossible for one person with a temporary assistant to perform all the work now done in our laboratory.

To properly perform the necessary work connected with the several divisions of the health department, there are needed six additional sanitary inspectors. There are at this time 1,042 persons licensed to sell milk in the City of Milwaukee, and each seller should be visited much more frequently than it is now possible to do. The decrease in the death rate among young children since this work has been commenced shows the vital importance of this work. To make it thorough and efficient, two additional milk collectors should be appointed.

There should be two inspectors of bakeries and candy manufactories, and two food inspectors. Without this addition to our force, the work cannot be properly done. The number of sanitary inspectors employed now is less in Milwaukee than in any city of this size in the United States known to this department, and the experiences of the past

year show that it is impossible to cover the entire ground, and do the work as it should be done with our present force.

I respectfully request that your Honorable Body will authorize the appointment of this additional number of sanitary inspectors that we may promptly execute the work already laid out, and which is necessary to be done by this department. Respectfully submitted,

WALTER KEMPSTER, M. D.,
Commissioner of Health.

REPORT OF ANALYST.

Walter Kempster, M. D., Commissioner of Health:

DEAR SIR—I herewith submit a report of the analytical work done by the Health Department in the year 1896. During that year the laboratories, which had been supplied with only a microscope, a hand power Babcock milk tester, an incubator, an Arnold steam sterilizer, and a few test tubes, were supplemented with all the appliances for making complete water analyses, milk and cream analyses, including a good supply of chemicals, and also apparatus for doing a considerable variety of bacteriological work, with a variety of staining regents and microscopic accessories, and a desk arranged especially for microscopic work.

A good microtome and bath are provided, so that any histological or pathological sections may be prepared if occasion requires it, and a microscope camera and dark room make it very convenient for making photomicrographs. So much material has overcrowded us, but the fitting up of a large room on the other side of the building will relieve this difficulty. This room is now nearly completed, and we will then be able to do the work better, and more easily. We have felt the need at times of a good fume chamber, desk room and certain other appliances, but these have always been furnished as soon as circumstances would permit, and we feel that the laboratory is destined to become one of the important parts of the department, and that the work will be exceedingly practical and in the interests of the city and its people.

MILK.

The inspection of so universal an article of food as milk, and especially as it is the only food of infants at the time when relatively minute adverses may throw the balance the wrong way, can hardly be too thorough. And not only is the physical welfare of the community to be considered, but in a business involving a million and a quarter of dollars annually, $50,000 or $100,000 may easily be abstracted from the

citizens' pockets. It may be a question whether a milkman can afford to sell good milk for 5 cents per quart, but good milk is what the milkmen are supposed to sell, and the customer has a right to demand it. If there is no profit in that, the milkman has his remedy. He can charge more for his milk. He can not legally abstract cream nor add water.

There may be three causes for poor milk, even though the milkman does not intentionally sophisticate his milk: First, unhealthy cows or certain breeds of cows, which, though they give a large amount of milk, give milk which contains a small amount of fat, and which is wholly inadequate for rearing children whose only food is milk. Second, filth, and this may be introduced at any time from the time it leaves the cow till it is delivered to the customer. Filth is of two kinds; one, which, when added, imparts its peculiar properties to the milk, but is otherwise inert, while the second kind, composed of living germs, which are able to reproduce themselves, and at the same time produce changes in the milk, some of them souring it, some producing a red or a blue color, some giving it a peculiar musty, nauseating odor, etc. It is these germs which decompose the milk and produce the most harm and cause the most sickness, especially diarrhoeal diseases, and as they thrive best in hot weather, the hot summer months have the highest infant mortality. One great cause of this is insufficient appliances for cooling. The third cause of poor milk is carelessness in handling the milk, i. e., not keeping it properly stirred up, so that some customers will receive from the top of the can milk rich in cream, while at the bottom of the can the milk contains a deficient amount of cream.

Daily analyses of milk have been made at the Health Department since May 1, 1896, and some analyses were made previous to that date.

From 12 to 36 samples are analyzed daily, the milk being collected by the inspectors especially detailed for that purpose. The milk is collected in half pint bottles, which are thoroughly cleansed, sterilized and labeled. Milk brought in the morning is analyzed in the afternoon.

The laws of Wisconsin require a minimum of 3 per cent. butter fat in the milk, and when the percentage falls below that the dealer is guilty of a misdemeanor and is liable to a fine.

It was the policy of the Health Department to send the following notice to those dealers whose milk was found below standard in 1896, and they were arrested only after a second offense:

HEALTH DEPARTMENT—CITY HALL.

MILWAUKEE, ... 189...

M.....

.....

The sample of .....

taken from your ..... by

Inspector No. ..... on ..... 189....,

shows as follows:

.....per cent. fats.

.....per cent. solids.

.....specific gravity.

....

and is below the standard required by law.

In case of any further violation of said law, proceedings will be instituted against you without further notice.

Yours very truly,

.....

Commissioner of Health.

After the dealers had become acquainted with the law it was thought best to arrest offenders the first time their milk was found below standard.

During the year 1896 analyses of 2,134 samples of milk were made, showing an average of 3.62 per cent. butter fat, and among this number 204 samples were below the required 3 per cent. with an average of 2.56 per cent. for each sample.

During the year 7 arrests were made, and an aggregate of $116 in fines imposed. There can be no doubt that the imposing of fines has a salutary effect, since in nearly every instance where they have been imposed, the milk had shown decided improvement in subsequent analyses.

The milk analyzed by the Health Department in June averaged 3.4 per cent., that in December nearly 3.8 per cent. Now, if this represents the milk of the whole city for those months, it would mean a difference of $60,000 annually, or $5,000 for the month to the citizens of Milwaukee. These figures are based on the supposition that the fat constitutes only one-half of the value of the milk, or in other words, each tenth of a per cent. gain in the amount of fat, means about $15,000 annually to the consumers.

The Wisconsin law in regard to milk standards is as low as that of any other state in the union, although a few others have the same low

standard, i. e., 3 per cent. of butter fat, no mention being made of specific gravity, total solids or solids not fat. Milwaukee has an ordinance which requires 3 per cent. butter fat, 12 per cent. total solids, and 9 per cent. solids not fat. This is much better as a standard, but owing to the conditions required in taking samples it is practically useless. A glance at the table showing total solids will give some idea of the number of cases where the milk is deficient in this respect. The fat might be placed at 3.50 per cent., however, without demanding anything unreasonable of the dealers. Some states require as high a standard as 3.7 per cent. of fat, 13.0 total solids and 9.0 per cent. of solids not fat, and certainly as good milk can be produced in Wisconsin as in any other state.

Some dealers think they are doing their duty if they "sell the milk just as it comes from the cow." This is not so if they have sickly or improperly cared for cows, or even if the cows do not furnish milk of sufficient richness, and the sooner they are brought to a realizing sense of this, the better it will be for those who depend on milk for all or part of their nourishment.

There is no desire to persecute the dealers, but it is believed that an ordinance sufficiently rigid and sufficiently enforced, so that they can not afford to sophisticate the milk can be and should be adopted. Milwaukee is justly proud of her low death rate, but so long as 300 or 400 infant lives are sacrificed annually on the altar of greed and ignorance, and for a large proportion of which there is a certain remedy, other feelings than those of pride are not inappropriate.

In the Fourteenth ward the proportion of deaths from diarrhœal diseases is double that of any other ward, and it is a notable fact that the worst milk has come from dealers supplying that ward; milk which has had water little better than dilute sewage added to it, milk from poor cows, milk with a large part of the cream removed. And while there is not enough data to make a sweeping assertion, there are the strongest reasons for believing that there is a definite relation between the deaths from diarrhœal diseases in the various wards and the purity, or rather the impurity, of the milk consumed.

The number of dealers licensed to sell milk in 1896 was 1,078, and the daily quantity of milk brought to the city for consumption amounted from 20,000 to 25,000 gallons, as nearly as can be ascertained.

TABLE No. 1.

Number analyses of milk made from Jan. 1, 1896, to Jan. 1, 1897...	2,134
Number having less than 3 per cent. fat.....	204
Average per cent. of 2,134 samples.....	3.62%
Number arrests made.....	7
Amount of fines imposed.....	$116.00
Number analyses of cream made.....	37
Average per cent. of 37 samples.....	19.2
Average per cent. of fat of 1,930 samples.....	3.73%
Average per cent. of fat of 204 samples.....	2.56%

TABLE NO. 2.

Month.	Samples Analyzed.	Av'g. Fat.	No. Below 3 per ct.	Cream Analyzed.	Average Per cent.	Arrests.	Fines.
January.....	58	3.7	7	.....	.....	....	.....
February.....	4	3.5	0	.....	.....	....	.....
March	8	3.26	0	.....	.....	....	.....
April	5	3.6	3	.....	.....	...	.....
May.....	83	3.66	7	1	13.0	....	.....
June	275	3.41	44	2	13.7	1	$25 00
July.....	300	3.53	43	7	19.2	3	70 00
August	311	3.6	31	4	24.2	3	21 00
September.....	261	3.61	10	1	26.0	....	.....
October.....	268	3.7	18	4	17.6	....	....
November.....	278	3.75	13	13	17.63	....	.....
December.....	283	3.79	15	5	22.2	....	.....
Totals.....	2,134	3.62	204	37	19.2	7	$116 00

TABLE NO. 3.

1896.	Total Solids.	Fat.	Specific Gravity.
July 23	11.39	2.8	1.032
July 24	11.00	2.4	1.031
July 24	10.00	1.8	1.031
July 24	11.35	3.2	1.032
July 24	11.90	2.8	1.034
July 24	11.50	3.0	1.0315
July 24	10.84	3.2	1.028
July 27	11.52	2.8	1.0325
July 27	11.05	3.6	1.027
July 27	11.39	2.8	1.032
July 27	11.16	2.6	1.032
July 27	10.93	2.4	1.032
July 27	10.47	2.1	1.0315
July 27	11.26	2.8	1.0315
July 28	10.35	3.0	1.027
July 28	11.44	3.5	1.029
July 28	11.45	3.4	1.0295
July 28	11.74	3.1	1.032
July 29	11.28	2.7	1.032
July 29	11.47	3.3	1.030
July 29	9.84	3.0	1.025
July 29	11.12	3.0	1.030
July 29	11.41	2.7	1.032

TABLE No. 3—CONTINUED.

1896.	Total Solids.	Fat.	Specific Gravity.
July 29	11.03	2.7	1.031
July 29	11.73	3.3	1.031
July 29	10.39	2.6	1.029
July 29	11.51	2.9	1.032
July 30	11.23	3.1	1.030
July 30	11.25	3.0	1.0305
July 30	11.15	2.7	1.0315
July 30	11.26	2.9	1.031
July 30	11.15	2.8	1.031
July 31	11.59	2.3	1.035
July 31	11.61	3.2	1.031
July 31	11.63	3.0	1.032
August 3	11.63	3.0	1.032
August 3	11.63	3.0	1.032
August 3	11.28	2.7	1.032
August 3	11.36	3.1	1.0305
August 6	11.76	3.0	1.0325
August 6	11.63	3.0	1.032
August 6	11.63	3.0	1.032
August 7	11.09	3.2	1.029
August 7	11.10	2.4	1.033
August 7	11.43	3.6	1.0285
August 10	11.75	3.4	1.0275
August 11	11.35	2.8	1.032
August 11	11.63	3.0	1.032
August 11	11.36	3.1	1.0305
August 11	11.50	3.0	1.0315

TABLE No. 3—CONTINUED.

1896.	Total Solids.	Fat.	Specific Gravity.
August 11	11.39	2.8	1.032
August 13	11.34	3.3	1.0295
August 13	11.89	4.0	1.0285
August 13	11.22	3.2	1.0295
August 13	10.84	3.2	1.028
August 18	11.41	2.7	1.0325
August 18	11.34	3.3	1.0295
August 18	11.25	2.0	1.035
August 18	10.69	2.3	1.0315
August 19	11.44	2.7	1.0325
August 19	11.66	2.7	1.0335
August 21	11.18	2.5	1.0325
August 31	11.77	2.8	1.0335
September 10	11.25	2.0	1 035
September 10	10.74	2.9	1.029
September 16	11.35	3.2	1.030
September 16	11.09	3.0	1.033
September 16	10.83	3.3	1.032
September 18	10.76	1.9	1.0335
September 21	11.65	2.8	1.0325
October 6	10.77	2.7	1.030
October 7	10.14	2.6	1.028
October 7	10.37	2.8	1.028
October 12	10.54	2.5	1.030
October 20	11.92	2.7	1.0345
October 23	11.54	2.7	1.033
November 2	11.66	2.7	1.0335

TABLE No. 3—CONTINUED.

1896.	Total Solids.	Fat.	Specific Gravity.
November 6	11.90	2.4	1.036
November 6	11.69	2.4	1.035
November 27	10.42	2.4	1.030
December 15	11.55	2.6	1.0335
December 30	11.92	2.7	1.0345

WATER.

Regular, systematic examinations of the lake water and well water about the city have been made since August, 1896, Mr. Ladoff doing the greater part of the work. The chemical examination, since it shows more accurately than a bacteriological examination, unless this is qualitative, the sanitary condition of the water, has been relied on almost exclusively in determining its character.

LAKE WATER.

Examinations of one or more samples per week from the laboratory tap, and one sample per week from the Pumping Station, with various samples taken from public buildings and places about the city, constitutes the work done on the lake water, and up to January, 1897, 59 samples have been analyzed with reference to Free and Albuminoid Ammonia, Chlorides, Nitrates, Nitrites, Oxidizable Matter, Total Solids and Organic Residue.

When the examinations were begun in August, the water contained at times a very large amount of sediment, consisting of sand, algae, diatoms and infusoria, many of which were identified. These samples of water contained a relatively large amount of Free and Albuminois Ammonia, and together with the presence of certain varieties of the infusoria, showed the presence of a too large amount of organic matter. A bacteriologic examination made at the University of Wisconsin showed in addition to a large numerical content of bacteria, the pres-

ence of bacterium coli commune and proteus vulgaris. No cause for this condition could be thought of, unless it came from the garbage which leaked from the boat as it passed the intake tunnel, or was thrown from it, or which floated down from the north with the current which nearly always sets southward. But whatever the cause, the water gradually improved, until in December it was far within the limits of any possible danger point, so far as a chemical examination could determine.

WELL WATER.

The same method was pursued in examining well water as that used for lake water. The Health Department inspectors procured the water from the wells in half gallon sterilized bottles, and are required to fill out at the time the following blank:

The sample of water should be collected after first pumping out the water that has been standing in the pipe.

Date .....

Time when collected .....

Location of well .....

Owned by .....

How far is the well from privy, barn yard, drain or sewer?.....

How deep is the well?.....

In what kind of soil is it located, swampy or high land?.....

How long has it been in use?.....

When was it last cleaned?.....

What kind of a well is it (dug, drive, bored)?.....

With what is it lined—stone, brick or plank?.....

How is it covered?.....

How is it covered in winter?.....

Are any persons in the house sick?.....

In what way are they sick?.....

Are any other families using water from this well?.....

Are any of those families sick?.....

Inspector's Number.....

This gives sufficient data on which to work and determine the potability of the water, and it must be admitted that judging from the results of the analyses, it would be a sanitary act to close all wells within the city limits as rapidly as the city water pipes can be extended to take their places. It is true that a very few wells have been found useable at the present time, but even these are liable at any time to become con-

taminated and unfit for use. At any rate, the Health Department is examining the wells as fast as complaints are made, and such wells as are found unfit for use are ordered closed.

Some wells seem to be on the border line of safety, and in such cases another sample is obtained after a time, or after the owner has cleaned his well, but as a rule the cleaning helps the condition but a very short time, and occasionally it makes it worse, since the withdrawing of the water relieves the pressure toward the well, and the more rapid percolation through the overloaded soil carries a greater amount of sewage, etc., into the well.

During the year the water from 68 wells was examined, of which only 4 were found to be fit for use, 18 more were suspicious, and 46 unfit for use. In most instances the high chlorine content showed that the well was receiving the leakage from privies, sewers or barn yards.

CITY WATER.

Water used for drinking should not contain more than the amounts following of each substance named:

When it is found to contain more than the amounts given, especially if Nitrates or Nitrites are also present, the water is unfit for drinking, until after it has been boiled for thirty minutes.

Drinking water must not contain more than .004 (four one-thousandths) of one part of Free Ammonia in 100,000, .02 (two one-hundredths) of one part of Albuminoid Ammonia in 100,000 parts, .5 (five-tenths of one part of Chlorides in 100,000 parts of each sample. The water should contain no Nitrates or Nitrites, and the Oxygen consumed should not exceed .2 (two-tenths) of one part in 100,000.

SEPTEMBER.

THE ANALYSIS MADE OF THE CITY WATER FROM THE SEVERAL PLACES INDICATED SHOW THE FOLLOWING RESULTS IN 100,000 PARTS.

SAMPLES FROM	Free Ammonia.	Albuminoid Ammonia.	Nitrates.	Nitrites.	Chlorides.	Oxygen consumed.
Laboratory	.0056	.0172	None.	.004	.5	.100
Laboratory	.0100	.0200	None.	.004	.5	.200
Laboratory	.0100	.0350	.....	.....	.5	.120
Laboratory	.0068	.0250	.0300	Trace.	.....	.....
Laboratory	.0100	.0500	.0300	Trace.	.7	.....
Sixteenth Ward	.0140	.0400	.....	.....	.....	.....
Second Ward	.0060	.0300	.0160	Trace.	.....	.....
Pumping Station	.0120	.0380	0080	.007	.....	.100
Soldiers' Home	.0020	0160	.0050	None.	.....	0.150
Soldiers' Home	.0050	.0180	0.0100	Trace.	.....	.....
Laboratory	.0040	.0260	.0040	Trace.	.....	.0100
Pumping Station	.0130	.0280	0.0300	None.	.....	.125
Laboratory	.0080	.0540	.0040	Trace.	.....	.080
Pumping Station	.0030	.0150	0.0004	Trace.	.....	.010
Laboratory	.0080	.0180	0.0005	Trace	.....	.....
Court House hydrant	.0028	.0110	0.0066	H'y trace	0.37	.0200
Court House hydrant	.0024	0148	None.	H'y trace	.....	.0100
Pumping Station	.0030	.0092	None.	0.04	.....	.0100

OCTOBER.

THE ANALYSIS MADE OF THE CITY WATER—CONTINUED.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Alb. Ammonia.	Oxid. Matter	Total Solids.	Loss on Ignition.	Chlorides.
Laboratory	Oct. 1	0.0000	Trace.	0.0080	0.0150	0.275	19.0	10.0	0.75
Pumping Station	" 3	0.0000	Trace	0.0060	0.0016	0.400	15.0	5.0	0.50
1007 Winnebago street	" 4	0.0240	Trace.	0.0090	0.0028	0.225	10.0	3.0	0.50
692 Hubbard street	" 6	0.0390	Trace.	0.0060	0.0016	0.125	15.0	9.0	0.50
Pumping Station	" 9	Trace.	Trace	0.0030	0.0220	0.400	10.0	5.0	0.50
Laboratory	" 13	0.0043	Trace.	0.0036	0.0084	0.400	10.0	5.0	0.50
Court House	" 15	0.0050	Trace	0.0030	0.0270	0.400	14.0	8.0	0.50
N. W. Depot hydrant	" 15	Trace.	Trace.	0.0030	0.0120	0.425	15.0	5.0	0.50
Pumping Station	" 16	0.0414	0.0000	0.0026	0.0264	0.412	11.0	5.5	0.50
Laboratory	" 20	Trace	0.0259	0.0050	0.0250	0.475	10.0	5.0	0.50
3207 Clybourn street	" 20	0.0000	0.2000	0.0060	0.0294	0.470	10.0	5.0	0.50
Pumping Station	" 26	0.0000	0.0150	0.0060	0.0080	0.450	20.0	10.0	0.50

NOVEMBER.

THE ANALYSIS MADE OF THE CITY WATER—CONTINUED.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Alb. Ammonia.	Oxid. Matter	Total Solids.	Loss on Ignition.	Chlorides.
Pumping Station	Nov. 1	0.0000	0.030	0.0006	0.0170	0.57	16.0	7.0	0.50
Court House	" 7	0.0470	0.008	0.0003	0.0164	0.50	20.0	10.0	0.59
Laboratory	" 7	0.0017	0.008	0.0003	0.0164	0.46	16.0	5.0	0.50
Pumping Station	" 9	0.0060	0.0025	0.0006	0.0154	0.47	15.0	5.0	0.50
Laboratory	" 8	0.000	0.000	0.0003	0.0120	0.48	14.0	6.0	0.50
1007 Winnebago street	" 11	0.000	0.000	0.0003	0.0230	0.47	8.0	5.0	0.50
Pumping Station	" 14	0.000	Trace.	0.0002	0.0240	0.55	14.0	7.0	0.50
Laboratory	" 16	0.000	0.000	0.0010	0.0150	0.50	10.0	8.0	0.50
Pumping Station	" 23	0.000	Heavy Trace.	0.0004	0.0100	0.45	9.0	2.0	0.50
Laboratory	" 23	0.000	Light Trace.	0.0097	0.0100	0.50	12.0	5.5	0.50
838 Astor street	" 23	0.000	Trace.	0.0003	0.0181	0.45	11.0	6.0	0.50
C., M. & St. P. Depot	" 28	0.000	0.000	0.0003	0.0110	0.50	5.0	3.5	0.50
Pumping Station	" 30	0.000	Trace.	0.0003	0.0097	0.50	15.0	5.0	0.50
Laboratory	" 30	0.000	Heavy Trace.	0.0005	0.0155	0.50	5.0	3.0	0.50

DECEMBER.

THE ANALYSIS MADE OF THE CITY WATER—CONTINUED.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Alb. Ammonia.	Oxid. Matter	Total Solids	Loss on ignition.	Chlorides.
Hotel Pfister	Dec. 2	0.0	0.0	0.0003	0.0132	0.450	9.0	4.0	0.500
N. W. Depot	" 3	0.0	Trace.	0.0003	0.0125	0.450	18.0	6.0	0.500
692 Hubbard street	" 4	0.0	Trace.	0.0003	0.0037	0.500	10.0	5.0	0.500
Pumping Station	" 5	0.0	0.003	0.0003	0.0127	0.475	9.0	4.0	0.500
319 Ellen street	" 9	0.0	Trace	0.0005	0.0070	0.500	7.0	3.0	0.500
Laboratory	" 9	0.0	Trace.	0.0010	0.0080	0.450	11.0	3.0	0.500
Pumping Station	" 11	0.0	Trace.	0.0003	0.0078	0.450	14.0	5.0	0.480
Pumping Station	" 13	Trace.	Trace.	0.0060	0.0097	0.450	14.0	7.0	0.625
3207 Clybourn street	" 14	0.0	Trace.	0.0005	0.0100	0.450	18.0	9 0	0.450
Laboratory	" 15	0.0	Trace.	0.0003	0.0100	0 475	14.0	5.0	0.450
1007 Winnebago street	" 16	0.0	Trace.	0.0060	0.0090	0.450	14 0	5.0	0.500
Pumping Station	" 19	0.0	0.0	0 0003	0.0080	0.475	14 0	6.0	0.500
666 Washington avenue	" 22	5.0	Trace.	0.0006	0.0060	0.475	20.0	11.0	0.500
949 Thirty-fifth street	" 26	0.0	Trace.	0.0003	0.0040	0.420	20.0	9 0	0.500
Laboratory	" 28	0.0	0.0	0.0010	0 0100	0.470	14.0	5.0	0.500
Pumping Station	" 30	0.0	0.0	0.0004	0 0080	0.470	15.0	6.0	0.500

WELL WATER—PARTS PER 100,000.

AUGUST.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albumonoid Ammonia.	Oxyd. Matter.	Total Solids.	Loss on Ignition.	Chlorides.	Result for use.
North ave bridge	Aug. 3	.75	.002	.....	.....	.12	.....	.....	9.5	Unfit.
1021 Davis street	" 4	Trace.	Trace	.....	.....	.175	.....	.....	3.3	Suspicious
530 Sixteenth street	" 8	Heavy Trace.	Heavy Trace.	.....	.....	.40	.....	.....	25.0	Unfit.
408 Chambers street	" 14	Heavy Trace.	None.	.....	.....	.25	.....	.....	8.5	Unfit.
426 Chambers street	" 14	Heavy Trace.	Heavy Trace.	.....	.....	.28	.....	.....	8.5	Unfit.
1018 Wine street	.....	Heavy Trace	Heavy Trace.	.....	.....	.12	.....	.....	11.0	Unfit.

WELL WATER—PARTS PER 100,000.

SEPTEMBER.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albumonoid Ammonia.	Oxyd. Matter.	Total Solids.	Loss on Ignition.	Chlorides.	Result for use.
230 Fourth street....	Sept. 4	Trace.	Trace.	.0500	.100	.50	.....	.....	.5	Unfit.
814 Sixth street	" 11	20.0	20.0	.0160	.046	.....	228.0	95.0	17.5	Unfit.
1399 Fifth street.....	" 12	20.0	Trace.	0160	.026	.....	.....	.....	21.5	Unfit.
764 Smith street.....	" 12	None.	Trace.	.0080	.014	....	.....	.....	4.0	Suspicious
645 Twenty-fifth St..	" 21	Heavy Trace.	Heavy Trace.	.0034	.0066	.10	90.0	1.5	2.3	Useable.

WELL WATER—PARTS PER 100,000.

OCTOBER.

PLACE.	Date.	Sulphates.	Phosphates.	Nitrates. Amount.	Nitrites. Amount.	Free Ammonia.	Albumonoid Ammonia.	Oxyd. Matter.	Total Solids.	Loss on ignition.	Chlorides.	Result for use.
1126 Fifth St.	Oct. 3	Present	Present	Very large.	Very large.	0.00174	0.0076	1.250	125.0	60.0	17.0	Unfit.
426 Chambers	" 9	Present	0.0	0.4	0.45	0.00360	0.0066	0.150	130.0	80.0	8.0	Suspicious
735 Isl'nd ave	" 9	Present	Present	0.0	Trace	0.00440	0.0220	0.200	144.0	60.0	18.0	Suspicious
15 Clark St...	" 14	Present	Trac.	Very large.	Very large.	0.01940	0.0210	0.700	150.0	70.0	9.0	Unfit.
505 Chestnut.	" 21	Present	Present	0.60	0.32	0.54000	0.0312	0.725	75.0	30.0	4.0	Suspicious
164 Lenox St.	" 21	Present	Present	0.85	Trace	0.03400	0.0154	4.75	80.0	30.0	7.0	Unfit.
768 Isl'nd ave	" 22	Present	Present	0 0255	0.075	0.09000	0.0110	5.25	55.0	15.0	3.0	Very. Suspicious
1009 Twelfth.	" 28	Present	Present	0.612	Trace	0.04020	0.0540	1.1	215.0	99.0	25.0	Unfit.
362 Grove St.	" 28	Present	Present	5.00	Trace	0.00075	0.0152	0.625	85.0	40.0	6.0	Unfit.

WELL WATER—PARTS PER 100,000.

NOVEMBER.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia	Albumonoid Ammonia	Oxyd Matter.	Total Solids.	Loss on Ignition.	Chlorides.	Phosphates.	Hardness.	Result for use.
735 Island ave...	Nov. 3	0 0255	0.000	0.0040	0.0170	0 500	110.0	45.0	1.45	Present	13.0	Suspicious.
1446 21st street...	" 7	0.0000	0.035	0.0035	0.0140	0.725	65.0	20.0	30.00	Present	14.0	Unfit.
1222 Vliet street.	" 8	H'v'y Trace	0.000	0.0015	0.0360	0.700	112.0	60.0	11.00	0.00	9.0	Suspicious.
1224 Vliet street..	" 8	H'v'y Trace	0.000	0.0006	0.0170	0.570	159.0	66.0	11.50	0.00	10.0	Suspicious.
S. of Becher.....	" 17	0.000	0.000	0.0015	0.0060	0.400	74.0	19.0	1.50	0.00	18.0	Good.
112 13th street...	" 20	0.085	Trace	0.0070	0.0004	0.450	67.0	22.0	4.00	0 00	8.0	Suspicious.
217 25th street ..	" 17	0.800	0.000	0.0099	Exc's	0.450	105.0	50.0	15.00	Present	12.0	Unfit.
280 Walker St...	" 18	Exc's	0.000	0.0080	0.0184	0.520	109 0	31.0	14.00	Present	9.0	Very Suspicious.
1040 Teutonia St.	" 23	2.500	Trace	0.0003	0.0427	0.750	119.0	49.0	17.5	Present	12.0	Unfit.
Jones Island.....	" 27	0.000	0.08	0.0050	0.0750	0.450	27.0	8.0	0.75	Present	7.5	Unfit.

WELL WATER—PARTS PER 100,000.

DECEMBER.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albumonoid Ammonia.	Oxyd. Matter.	Total Solids.	Loss on ignition.	Chlorides.	Result for use.
702 Twelfth avenue.....	Dec 5.	Large excess	0.0	0.0016	0.016	0.600	102.0	28.0	8.5	Suspicious.
1607 Vliet street.....	" 7	Large excess	0.0	0.0140	0.011	0.650	147.0	63.0	16.5	Unfit.
Jones Island.....	" 11	0.0	0.0	0.0039	0.010	0.500	29.0	8.6	0.75	Suspicious.
728 Wilson street.....	" 17	2.0	0.0	0.0189	0.002	0.475	72 0	28.0	7.25	Suspicious.
611 Rogers street	" 17	5.0	0.0	0.0300	0.096	0.650	649.0	570.0	60.0	Unfit.
1710 Vliet street.....	" 22	2.0	0.0	0.0006	0.013	0.600	159.0	18.0	8.0	Suspicious.

BACTERIOLOGICAL ANALYSIS OF WATER.

DATE.	Where Taken From.	No. Colonies.
September, 1896	Laboratory Tap	87
October 13th, 1896	Laboratory Tap	700
October 15th, 1896	Courthouse Hydrant	249
October 15th, 1896	Sewer, Jones Island	2,318,400
October 24th, 1896	Pumping Station	17,640
November 11th, 1806	Pier, Jones Island	109,462
November 14th, 1896	Pumping Station	542
November 20th, 1896	City Hall Tap	64
November 21st, 1896	Pumping Station	55
November 27th, 1896	City Hall Tap	156
November 27th, 1896	C., M. and St. P. Depot	67

DIPHTHERIA.

Some work in making cultures from patients' throats suspected of having diphtheria, has been done during the year. Such work, if properly done, can not fail to be of great benefit, both in the diagnosis of doubtful cases, and also in determining the time at which patients suffering from the disease are no longer capable of transmitting it.

It has been our custom to report simply as to the presence or absence of the Klebs-Loeffler bacillus, leaving the diagnosis of the disease with the physician in charge, inasmuch as it is impossible without inoculating some susceptible animal to state definitely whether the Klebs-Loeffler bacilli found are virulent or not. This probably has led to misunderstandings in some instances, and to avoid these, I would advise the adoption of the following forms, which are practically the same as those in use in the Brooklyn Health Department:

[Form A.]

HEALTH DEPARTMENT—CITY HALL.

TELEPHONE 599.

Directions for making cultures in suspected cases of Diphtheria.

The patient should be placed in the best light attainable, and if a child, properly held. In cases where it is possible to get a good view of the throat, depress the tongue and rub the cotton swab gently, but freely, against any visible pseudo membrane or exudate.

In other cases, including those in which the exudate is confined to the larynx, open the mouth and pass the swab back until it reaches the pharynx,

and then rub it freely against the mucous membrane. Without laying the swab down, remove the lid from the culture box, and rub that portion which has touched the exudate gently over the surface of the serum mixture. Do not break the surface of the serum, for it is a surface growth of bacteria that is desired. Then replace the swab in its tube, put in the plug, put the cover securely on the box, fill out enclosed blank, and return the whole outfit at once to the station from which it was obtained. Do not use boxes which are contaminated, or in which the contents have liquified or dried up. Do not make culture within two hours after any antiseptic wash or spray has been used in the patient's throat.

To insure a report the following day, cultures should be left at the stations before 3 P. M. Reports may be obtained by telephone after 10 A. M.

[Form B.]

HEALTH DEPARTMENT—CITY HALL.

MILWAUKEE, WIS., ... 189...

Dr. .....

Dear Sir—The examination of the culture from the throat of..... ..... made on ..... does not show the presence of diphtheria bacilli.

The case is, therefore, in all probability, not true diphtheria,* and no further cognizance will be taken of it by the department unless by the special request of the physician in attendance.

.....

Bacteriologist.

---

*This conclusion is based on the supposition that the inoculation was made before the commencement of convelescence and strictly in accordance with the directions enclosed in the box. Experience has shown that in a very small proportion of cases diphtheria bacilli are not found in the first culture, though later cultures may contain them in large numbers. In these cases a confirmatory culture will be gladly examined.

[Form C.]

HEALTH DEPARTMENT—CITY HALL.

MILWAUKEE, WIS., ... 189...

Dr. .....

Dear Sir—The examination of the cultures made by inoculating the medium with the exudation from the throat of..... .... on ..... does not admit of an exact bacteriological diagnosis, for the following reasons:

A. The inoculation was made at so late a period in the disease that it is possible that the diphtheria bacilli, though now absent, were at an earlier time present.

B. The growth on the culture medium was so scanty that it is possible that the inoculation was not properly made, or that some antiseptic had been applied to the throat shortly before obtaining the material for inoculating the culture.

C. The culture medium was badly contaminated.

D. The serum in the box was too dry to permit of the growth of the diphtheria bacilli.

a. Another culture is requested.

b. The case will be treated as one of diphtheria.

c. The case will be treated as one of false diphtheria, unless the physician in charge of the case requests otherwise.

.....

Bacteriologist.

[Form D.]

HEALTH DEPARTMENT—CITY HALL.

MILWAUKEE, WIS., ... 189...

Dr. .....

Dear Sir—The examination of the culture from the throat of .... made on .....does not show the presence of the diphtheria bacilli.

The case is, therefore, ready for disinfection, if the circumstances allow.

.....

Bacteriologist.

[Form E.]

HEALTH DEPARTMENT—CITY HALL.

MILWAUKEE, WIS., ... 189...

Dr. .....

Dear Sir—The examination of the culture from the throat of .... made on ..... still shows the presence of diphtheria bacilli.

The case is, therefore, not ready for disinfection, and another culture is desired.

.....

Bacteriologist.

[Form F.]

HEALTH DEPARTMENT—CITY HALL.

MILWAUKEE, WIS.,..... 189...

Dr. .....

Dear Sir—The examination of the culture from the throat of .... made on ..... shows the presence of diphtheria bacilli.

The case is, therefore, one of diphtheris.*

.....

Bacteriologist.

---

*This diagnosis assumes the existence of a throat inflammation. Diphtheria bacilli are occasionally present in the throats of healthy persons who have been in contact with diphtheria cases. Such persons may or may not subsequently develope the disease, but are capable of communicating the disease to those more susceptible.

MILWAUKEE, WIS., ... 189...

Bacteriologist Health Department.

I have made a culture from the throat of.....
..... on ..... 189...., in accordance with the instructions accompanying the box.

This is a (primary*) (secondary) culture.

1. Age of patient.....
2. Date when disease began.....
3. Is there visible membrane?.....
4. Is the throat inflamed?.....

....., M. D.,
Attending Physician.

*Draw a line through the word not wanted.

During the year 1896 there were 70 examinations made from patients' throats, the results of which are shown in the table appended:

BACTERIOLOGICAL ANALYSES.

Diphtheria	70
Number primary cultures	37
Number secondary cultures	33
Number Klebs-Loeffler bacillus found	41
Number Klebs-Loeffler bacillus not found	29
Number containing Streptococcus or Staphytococcus only	7
Tuberculosis, sputum	23
Milk, for tubercle bacilli	6
Lake and well water	10
Milk	2
Pus	5
Miscellaneous	12

OTHER CHEMICAL ANALYSES.

During the year two cases of mass poisoning occurred in the city, though in neither instance did there happen to be any fatal cases.

One, in which the students of Concordia College were made violently ill from eating smoked white fish. In all 89 were made sick, including some of the professors, and one student was in a precarious condition for several days. It was learned that these fish were also shipped to various places in the state north of Milwaukee, and a number of deaths occurred among those who ate them. Some of the fish

which poisoned the students was brought to the Health Department and an extract made from it. This extract reduced Potassium Ferrocyanide, and also when injected into a dog and a cat at the Wisconsin College of Physicians and Surgeons by Dr. D. J. Hayes, who attended the students, and myself, produced symptoms very similar to those which the students had. The dog received a much smaller dose than did the cat, and the symptoms were proportionately less. It is supposed that the fish underwent decomposition from being left in the nets for several days, owing to rough weather which prevented the fishermen from getting out to them. The thrifty fishermen, instead of throwing away the decomposed fish, cured them along with the others.

The second case of poisoning was from arsenic which had been put into the flour of a baker. Fortunately it was put into the flour before it was mixed, so that the arsenic was evenly distributed throughout the bread. It is not known how many were made sick, but there must have been 300 or 400.

As might be supposed, the symptoms varied from very slight to very severe, but happily no deaths resulted.

A quantitative examination made from about 100 grams of the bread showed about one-seventh of a grain of arsenic.

There was nothing remarkable about this case except the very large number affected and the fact that no one died from it.

The contents of three stomachs were analyzed by the department in 1896. In two the special examination for strychnine was made and found in one. In the third a general examination was made with negative results.

SPECIAL CHEMICAL ANALYSES.

Water—Lake	59
Well	68
Milk	2,134
Cream	37
Human milk	2
Goats' milk	3
Cake, examined for poison	1
Urine analyses	10
Honey	1
Maple syrup	1

Bread	5
Stomach contents	3
Smoked white fish	1
Baking powder	1
Sulphuric acid	4
Eggs	1
Ham	1
Vinegar	2

Respectfully submitted,

W. C. BENNETT, M. D.,

Analyst.

BUREAU OF VITAL STATISTICS.

Walter Kempster, M. D., Commissioner of Health:

DEAR SIR—I present herewith for your consideration a statement of the work of this bureau for the year 1896.

During the year there were 4,620 burial permits issued. Of these 354 were for stillbirths, and 362 for the interment of bodies brought into the city.

There were also issued 220 permits for the transportation of dead out of the city.

The number of deaths during the year amounted to 3,904, being 19 more than for 1895, and the death rate on an estimated population of 260,000 was 15.00 per thousand, as against a death rate of 15.54 on an estimated population of 250,000 for 1895.

Of children under five years of age there were 1,791 deaths, at an annual death rate of 6.88 per thousand, or 45.87 per cent. of the total deaths.

There were 1,297 deaths under one year, or 33.22 per cent. of the total deaths.

The births reported number 7,855, representing an annual birth rate of 30.21 per thousand on the estimated population. This does not include the 354 stillbirths.

Under the provisions of Chapter 205, Laws of 1897, all marriages solemnized in the city will, after June 1, 1897, be reported to the department, thus giving to this bureau a complete record of births, marriages and deaths.

On the following pages will be found, in tabular form, an analysis of the vital statistics as recorded during the year.

Very respectfully,

J. W. COON, M. D.,
Registrar.

STATISTICAL TABLES.

TABLE NO. 1.

Showing the Reported Mortality, according to Cause, Age, Sex and Social Condition for the Year 1896. The Annual Death Rate was 15.00 per 1,000 on an estimated population of 260,000. The Annual Death Rate for 1895 was 15.54 per 1,000.

CAUSE OF DEATH.	Total.	Male.	Female.	Married.	Single.	Under 1 yer.	1 to 5 years.	5 to 10 years.	10 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	70 to 80 years.	80 to 90 years.	90 to 100 years.	Total for 1895.
Diphtheria	198	97	101	3	195	8	114	59	13	4	.....	.....	.....	.....	.....	.....	.....	112
Croup	56	33	23	.....	56	5	37	13	1	.....	.....	.....	.....	.....	.....	.....	.....	67
Scarlet Fever	4	4	.....	.....	4	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	5
Typhoid Fever	46	26	20	24	22	1	1	7	7	8	11	5	3	1	2	.....	.....	63
Small Pox	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30
Typhus Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Measles	29	18	11	.....	29	10	16	2	1	.....	.....	.....	.....	.....	.....	.....	.....	1
Whooping Cough	15	2	13	.....	15	8	6	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	60
Diarrhoeal Disease	298	170	128	8	290	259	29	1	1	1	1	.....	.....	3	3	.....	.....	323
Phthisis Pulmonalis	335	164	171	203	132	3	5	2	41	115	79	47	23	9	9	2	.....	288
Other Tubercular	110	54	56	31	79	17	23	6	14	17	14	9	5	3	2	.....	.....	117
Malarial Fever	1	.....	1	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nervous System	511	274	237	142	369	266	61	9	13	13	17	12	33	37	27	12	1	488
Heart Disease	214	93	121	179	35	6	4	4	9	9	21	25	33	44	43	15	1	169
Bronchitis	189	105	84	57	132	97	30	1	2	.....	1	1	8	6	23	17	3	181
Pneumonia	237	130	107	100	137	43	63	11	7	13	21	14	14	23	20	7	1	271

Other Respiratory	92	52	40	45	47	16	17	4	5	4	4	2	10	10	18	2	.....	115
Digestive Fever	336	187	149	117	219	145	37	8	16	14	21	18	20	32	21	3	1	378
Urinary System	134	80	54	106	28	5	5	5	4	15	7	13	17	21	34	8	1	117
Congenital Debility	374	208	166	.....	374	368	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	364
Old Age	108	39	69	106	2	.....	.....	.....	.....	.....	.....	.....	.....	4	39	55	10	116
Suicides	58	48	10	44	14	.....	.....	.....	3	7	13	10	16	5	2	2	.....	48
Other Violent	143	114	29	69	74	3	21	14	13	20	18	18	15	11	5	4	1	145
All Others	416	163	253	301	115	37	16	12	18	45	66	44	57	66	45	9	1	427
Total	3,904	2,061	1,843	1,535	2,369	1,297	494	161	168	284	244	218	254	275	303	136	20	3,885

In the following tables will be found, in detail, the number of deaths from various causes not specifically set forth in Table No. 1:

a.

ZYMOTIC DISEASES.

Cerebro Spinal Meningitis	19
Cholera Infantum	97
Cholera Morbus	8
Diarrhoea, Infantile	97
Dysentery	10
Entero Colitis	52
Erysipelas	9
Influenza	14
Pyaemia	3
Septicaemia	15
Septicaemia, Puerperal	38
Syphilis	6
Total	368

b.

DIETETIC DISEASES.

Alcoholism	6
Delirium Tremens	2
Total	8

c.

DEVELOPMENTAL.

Asphyxia Neonatorum	2
Atelectasis	3
Cleft Palate	1
Cyanosis	20
Difficult Birth	2
Icterus Neonatorum	5
Melanae Neonatorum	1
Open Foramen Ovale	10
Premature Birth	104
Spina Bifida	2
Trismus Neonatorum	4
Total	154

d.

CONSTITUTIONAL DISEASES.

Anaemia Pernicious	7
Cancer, Unclassified	48
Cancer of Bladder	1
" " Bowels	2
" " Breast	8
" " Colon	1
" " Face	2
" " Kidneys	1
" " Liver	10
" " Oesphagus	6
" " Pancreas	2
" " Rectum	1
" " Spleen	1
" " Stomach	66
" " Uterus	9
Caries of Vertebrae	2
Diabetes Mellitus	16
Hodgkin's Disease	1
Osteo-sarcoma	1
Rheumatism	33
Rheumatoid Arthritis	1
Ricketts	7
Sarcoma of Thigh	1
Scrofula	1
Tubercular Enteritis	7
" Laryngitis	2
" Meningitis	39
" Pericarditis	1
" Peritonitis	2
Tuberculosis, General	54
Tuberculosis of Kidneys	2
Total	335

e.

CIRCULATORY SYSTEM.

Angina Pectoris	10
Aortic Aneurism	1
Arterio Selerosis	11
Cardiac Paralysis	1
Embolism	4
Endo-carditis	11
Fatty Degeneration of Heart	6

Heart Disease, Unclassified	41
Myo-carditis	4
Open Foramen Ovale	1
Peri-carditis	9
Phlebitis	2
Rupture of Heart	3
Valvular Heart Disease	110
Total	214

f.

DIGESTIVE SYSTEM.

Appendicitis	26
Cholelithiasis	3
Cirrhosis of Liver	24
Colitis	1
Dentition	5
Dyspepsia	4
Enteritis	37
Gastric Ulcer	4
Gastritis	41
Gastro-enteritis	110
Haematemesis	2
Hepatitis	9
Hernia Strangulated	6
Icterus Gravis	1
Ilio-colitis	1
Imperforate Rectum	1
Intestinal Hemorrhage	1
" Obstruction	11
" Ulcer	2
Peritonitis	45
Stomatitis	1
Stricture of Oesophagus	1
Total	336

g.

NERVOUS SYSTEM.

Apoplexy	108
Cerebral Abscess	2
" Anaemia	1
" Compression	1
" Meningitis	11
" Softening	2
" Tumor	3
Cerebritis	9
Convulsions	246
Encephalitis	1
Epilepsy	6
Hemiplegia	1
Hydrocephalus	7
Hystero-epilepsy	1
Locomotor Ataxia	4
Melancholia	2
Meningitis	77
Meningo Encephalitis	1
Multiple Neuritis	1
Myelitis	3
Paralysis	14
Polyo-myelitis	3
Spinal Meningitis	7
Total	511

h.

RESPIRATORY SYSTEM.

Asthma	19
Atelectasis, Prelm	1
Broncho Pneumonia	29
Emphysema	4
Empyaemia	2
Laryngitis	5
Oedema of Glottis	5
Oedema of Lungs	1
Pleurisy	16
Pleuro Pneumonia	4
Pulmonary Abscess	1
Pulmonary Hemorrhage	1
Tonsillitis	3
Typhoid Pneumonia	1
Total	92

i.

REPRODUCTIVE SYSTEM.

Abortion	1
Endo-metritis	2
Extra Uterine Pregnancy	2
Ovarian Tumor	3
Placeuta Praevia	3
Post Partum Hemorrhage	3

Pre Partum Hemorrhage	1
Puerperal Eclampsia	1
Pyosalpnix	1
Uterine Fibroids	3
Total	20

j.

GENITO URINARY SYSTEM.

Amyloid Kidney	1
Bright's Disease	20
Contracted Kidney	1
Cystitis	14
Nephritis	85
Orchitis	1
Prostatitis	7
Pyo-nephrosis	1
Uraemia	4
Total	134

k.

VIOLENCE.

Accidents, Unclassified	28
Asphyxia by Illuminating Gas	4
Burns	21
Concussion of Brain	2
Drowning, Accidental	37
Falls, Accidental	9
Fracture of Femur	2
" " Skull	3
" " Spine	2
Gun Shot Wound, Accidental	1
Gun Shot Wound, Murder	2
Peritonitis Tranmatic	1
Poisoning, Accidental	7
Railroad Accidents	13
Street Car Accidents	9
Suffocation, Accidental	1
Suicides, Unclassified	9
Suicides, by Cutting Throat	2
" " Drowning	6
" " Hanging	15
" " Poison	17
" " Shooting	9
Tetanus, Tranmatic	1
Total	201

l.

ALL OTHERS, NOT INCLUDED IN FOREGOING TABLES.

Abdominal Tumor	2
Abscess	7
Cretinism	1
Dropsy	6
Eczema, Pustular	3
Fibroid Tumor	1
Furuncle	2
Ill Defined	20
Inanition	60
Infantile Atrophy	5
Infantile Debility	110
Lightning Stroke	1
Lymphangitis	1
Malnutrition	3
Marasmus	41
Mastoid Abscess	1
Otitis Media	4
Pelvic Abscess	1
Pemphigus	1
Phlegmonous Cellulitis	1
Proas Abscess	1
Senile Gangrene	4
Sunstroke	2
Thrush	1
Umbilical Hemorrhage	2
Total	281

TABLE No. 2.

Showing the Reported Mortality, according to Cause, Age, Sex and Social Condition for the month of January, 1896.

The Annual Death Rate per 1,000 for the month was 14.49 on an estimated population of 255,000.

During the month there were 22 deaths less than for the corresponding month of 1895.

	Total.	Males.	Females.	Married.	Single.	Under 1 year.	From 1 to 5 yrs.	5 to 10 years.	10 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	70 to 80 years.	80 to 90 years.	90 to 100 years.	Over 100 years	Total same month last year.
Tot'l all causes	308	166	142	128	180	83	44	14	16	24	20	23	16	24	28	16	....	....	330
Diphtheria....	21	10	11	....	21	...	14	6	1	....	....	....	....	....	....	...	....	....	16
Croup.....	7	5	2	....	7	1	5	1	....	....	....	....	...	....	....	...	....	....	5
Scarlet Fever..	....	....	....	....	....	....	....	....	....	....	....	....	...	....	....	....	....	....	..
Typhoid Fever	6	5	1	4	2	....	....	.. .	2	2	....	2	....	....	....	....	....	....	9
Small-pox.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	10
Typhus Fever.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Measles.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
Wh'p'gCough.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...	....	....	6
Diarrhoeal Dis	6	3	3	....	6	5	1	....	....	....	....	....	....	...	....	....	....	....	4
Phthisis.....	26	14	12	17	9	....	....	....	3	8	7	5	1	....	2	....	....	....	25
Other tubercular Diseases.	13	7	6	5	8	1	2	...	1	2	1	4	1	....	1	....	....	...	13
Malarial Fever	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Nerv. System..	46	23	23	12	34	23	7	2	1	1	....	....	1	5	3	3	....	....	48
Heart Disease.	22	11	11	17	5	....	....	2	....	2	3	2	4	1	6	2	...	....	10
Bronchitis....	11	6	5	7	4	2	2	....	....	....	....	....	....	2	4	1	....	....	20
Pneumonia...	24	15	9	10	14	5	6	....	2	2	1	....	1	3	3	1	....	....	26
Other diseases of Res. Org.	10	5	5	3	7	2	4	1	....	....	....	....	1	....	2	....	....	....	14
Diseases of Digestive Syst.	21	11	10	8	13	9	1	....	1	1	....	3	1	3	1	1	....	....	26
Urinary Syst.	9	8	1	9	...	....	....	....	....	1	....	2	2	3	....	1	....	....	.0
Congenital Debility.*	31	20	11	....	31	31	...	....	....	....	....	....	....	....	....	....	....	....	31
Old Age.....	8	4	4	8	....	....	....	....	....	....	....	....	....	1	1	6	....	...	8
Suicides	1	1	...	....	1	...	....	....	....	....	1	....	....	....	....	....	..	....	1
Other violent deaths.	7	6	1	4	3	....	....	1	1	2	1	1	1	....	....	....	...	....	7
All other causes.	39	12	27	24	15	4	2	1	4	3	6	4	3	6	5	1	....	....	41

*Including Premature Births, Atrophy, Inanition, Infantile Debility, Marasmus, Atelectasis and Preternatural Births.

TABLE No. 3.

Showing the Reported Mortality, according to Cause, Age, Sex and Social Condition for the month of February, 1896.

The Annual Death Rate per 1,000 for the month was 14.44 on an estimated population of 255,000.

During the month there were 40 deaths less than for the corresponding month of 1895.

	Total.	Males.	Females.	Married.	Single.	Under 1 year.	From 1 to 5 yrs.	5 to 10 years.	10 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	70 to 80 years.	80 to 90 years.	90 to 100 years.	Over 100 years.	Total same month last year.
Tot'l all causes	307	160	147	145	162	76	37	10	13	31	29	20	29	19	31	10	2	....	347
Diphtheria....	15	6	9	1	14	1	8	4	1	1	....	....	....	....	....	....	....	....	7
Croup.....	4	4	....	....	4	....	4	....	....	....	....	....	....	....	....	....	....	....	5
Scarlet Fever.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Typhoid Fever	7	4	3	4	3	1	....	....	1	1	1	1	2	....	....	....	....	....	2
Small-pox.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	8
Typhus Fever.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Measles.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Wh'p'gCough.	2	....	2	....	2	1	1	....	....	....	....	....	....	....	....	....	....	....	15
Diarrhoeal Dis	7	3	4	....	7	6	1	....	....	....	....	....	....	....	....	....	....	....	1
Phthisis.... ...	25	14	11	17	8	....	....	1	1	6	7	3	4	....	2	1	....	....	23
Other tubercular Diseases.	10	6	4	3	7	1	4	1	1	2	1	....	....	....	....	....	....	....	11
Malarial Fever	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Nerv. System.	35	24	11	11	24	14	5	....	2	2	1	2	3	4	2	....	....	....	36
Heart Disease.	17	11	6	15	2	....	1	....	....	2	2	2	4	2	3	1	....	....	16
Bronchitis	14	9	5	6	8	5	3	....	....	....	1	....	....	....	4	1	....	....	30
Pneumonia . .	25	14	11	15	10	4	4	1	....	1	4	1	2	3	4	1	....	....	38
Other diseases of Resp. Org.	11	6	5	3	8	1	3	1	1	2	....	....	....	1	2	....	....	....	18
Diseases of Digestive Syst.	27	14	13	10	17	11	2	1	2	2	2	1	3	1	2	....	....	....	25
Urinary Syst..	15	7	8	12	3	....	....	....	....	5	....	2	2	3	2	1	....	....	12
Congenital Debility.*	26	11	15	....	26	26	....	....	....	....	....	....	....	....	....	....	....	....	40
Old Age.....	11	4	7	11	....	....	....	....	....	....	....	....	....	....	5	4	2	....	12
Suicides.....	4	3	1	2	2	....	....	....	....	2	1	....	1	....	....	....	....	....	4
Other violent deaths.	4	2	2	4	....	....	....	....	....	....	....	2	1	1	....	....	....	....	10
All other causes.	48	18	30	31	17	5	1	1	4	5	9	6	7	4	5	1	....	....	34

*Including Premature Births, Atrophy, Inanition, Infantile Debility, Marasmus, Atelectatis and Preternatural Births.

TABLE No. 4.

Showing the Reported Mortality, according to Cause, Age, Sex, and Social Condition for the month of March, 1896.

The Annual Death Rate per 1,000 for the month was 14.73 on an estimated population of 255,000.

During the month there were 93 deaths less than for the corresponding month of 1895.

	Total.	Males.	Females.	Married.	Single.	Under 1 year.	From 1 to 5 yrs.	5 to 10 years.	10 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	70 to 80 years.	80 to 90 years.	90 to 100 years.	Over 100 years.	Total same month last year.
Tot'l all causes	313	158	155	151	162	72	39	8	22	19	26	18	26	28	38	14	3	....	406
Diphtheria. ..	14	11	3	....	14	....	9	3	2	....	....	....	....	....	....	....	....	....	11
Croup.....	1	....	1	....	1	....	1	....	....	....	....	....	....	....	....	....	....	....	10
Scarlet Fever	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Typhoid Fever	3	1	2	1	2	....	1	1	....	....	....	....	....	1	....	....	....	....	5
Small-pox.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	7
Typhus Fever.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Measles.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Wh'p'g Cough.	1	....	1	....	1	....	1	....	....	....	....	....	....	....	....	....	....	....	9
Diarrhoeal Dis	4	4	....	....	4	3	1	....	....	....	....	....	....	....	....	....	....	....	3
Phthisis.	35	20	15	17	18	....	1	....	8	11	5	6	2	1	1	....	....	....	26
Other tubercular Diseases.	11	3	8	1	10	....	5	2	2	....	....	1	...	1	....	....	....	....	7
Malarial Fever	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Nerv. System.	42	26	16	9	33	23	3	1	3	1	1	....	3	4	2	1	....	....	56
Heart Disease.	23	8	15	19	4	1	....	....	3	....	4	2	5	3	4	1	....	....	15
Bronchitis	9	6	3	3	6	4	2	....	....	....	....	....	....	....	....	3	....	....	37
Pneumonia ...	24	12	12	15	9	....	6	....	....	2	3	3	2	3	4	1	....	....	58
Other diseases of Resp. Org.	8	4	4	6	2	2	....	....	....	....	1	....	2	....	2	1	....	....	24
Diseases of Digestive Syst.	28	13	15	14	14	9	3	....	2	....	5	3	2	3	1	....	....	....	17
Urinary Syst..	19	11	8	16	3	1	...	....	1	2	....	2	1	3	9	....	....	....	12
Congenital Debility.*	29	16	13	....	29	28	1	....	....	....	....	....	....	....	....	....	....	....	31
Old Age... ...	16	3	13	15	1	....	....	....	....	....	....	....	....	....	6	7	3	....	12
Suicides.....	3	3	....	3	....	....	....	....	....	....	....	1	1	....	1	....	....	....	2
Other violent deaths.	10	6	4	4	6	....	3	....	1	....	1	....	2	2	1	....	....	....	13
All other causes.	33	11	22	28	5	1	2	1	....	3	6	...	6	7	7	....	....	....	50

*Including Premature Births, Atrophy, Inanition, Infantile Debility, Marasmus, Atelectasis and Preternatural Births.

TABLE No. 5.

Showing the Reported Mortality, according to Cause, Age, Sex and Social Condition for the month of April, 1896.

The Annual Death Rate per 1,000 for the month was 15.15 on an estimated population of 255,000.

During the month there was 1 death more than for the corresponding month of 1895.

	Total.	Males.	Females.	Married.	Single.	Under 1 year.	From 1 to 5 yrs.	5 to 10 years.	10 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 oears.	70 to 80 years.	80 to 90 years.	90 to 100 years.	Over 100 years	Total same month last year.
Tot'l all causes	322	175	147	138	184	110	31	10	10	27	24	22	21	23	31	13	....	....	321
Diphtheria..	8	3	5	....	8	....	6	2	....	....	....	....	....	....	....	....	....	....	8
Croup.....	4	1	3	....	4	1	3	....	....	....	....	....	....	....	....	....	....	....	2
Scarlet Fever.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Typhoid Fever	5	3	2	2	3	....	....	2	....	....	2	....	....	....	1	....	....	....	6
Small-pox.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	4
Typhus Fever.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Measles.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Wh'p'gCough.	3	....	3	....	3	....	2	1	....	....	....	....	....	....	....	....	....	....	6
Diarrhoeal Dis	11	8	3	....	11	11	....	....	....	....	....	....	....	....	....	....	....	....	7
Phthisis	35	19	16	21	14	....	....	....	3	13	6	8	2	3	....	....	....	....	31
Other tubercular Diseases.	12	5	7	2	10	5	2	1	1	1	....	1	1	....	....	....	....	....	9
Malarial Fever	1	....	1	....	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....
Nerv. System.	52	35	17	15	37	31	4	....	1	....	3	3	3	5	2	....	....	....	48
Heart Disease.	22	10	12	22	....	....	....	....	....	1	1	1	3	5	8	3	....	....	14
Bronchitis	15	8	7	2	13	9	3	....	1	....	....	....	....	....	1	1	....	....	22
Pneumonia ...	23	12	11	9	14	7	4	1	....	1	1	....	3	2	3	1	....	....	27
Other diseases of Resp. Org.	10	5	5	4	6	2	1	....	1	1	2	....	1	....	2	....	....	....	10
Diseases of Digestive Syst.	27	15	12	7	20	15	2	....	1	4	....	1	1	2	1	....	....	....	23
Urinary Syst..	11	8	3	10	1	....	1	....	....	....	1	1	3	....	3	2	....	....	8
Congenital Debility.*	26	19	7	....	26	26	....	....	....	....	....	....	....	....	....	....	....	....	27
Old Age.....	8	3	5	8	....	....	....	....	....	....	....	....	....	1	3	4	....	....	10
Suicides.... ..	5	2	3	4	1	....	....	....	1	1	1	2	....	....	....	....	....	....	7
Other violent deaths.	7	5	2	7	....	....	....	....	....	2	1	....	1	1	1	1	....	....	7
All other causes.	37	14	23	25	12	3	2	3	1	3	6	5	3	4	6	1	....	....	44

*Including Premature Births, Atrophy, Inanition, Infantile Debility, Marasmus, Atelectasis and Preternatural Births.

TABLE No. 6.

Showing the Reported Mortality, according to Cause, Age, Sex and Social Condition for the month of May, 1896.

The Annual Death Rate per 1,000 for the month was 15.06 on an estimated population of 255,000.

During the month there were 32 deaths more than for the corresponding month of 1895.

	Total.	Males.	Females.	Married.	Single.	Under 1 year.	From 1 to 5 yrs.	5 to 10 years.	10 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years	50 to 60 years.	60 to 70 years.	70 to 80 years.	80 to 90 years.	90 to 100 years.	Over 100 years.	Total same month last year.
Tot'l all causes	320	160	160	134	186	98	38	9	22	25	29	21	19	19	20	18	2	....	288
Dip'htheria ...	13	4	9	....	13	1	9	1	2	....	....	..	....	....	....	....	....	....	4
Croup.....	4	3	1	....	4	....	1	3	....	....	....	....	....	....	....	....	....	....	4
Scarlet Fever.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Typhoid Fever	1	1	....	....	1	....	....	....	....	1	....	....	....	....	....	....	....	....	3
Small-pox	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Typhus Fever.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Measles.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Wh'p'g Cough	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	5
Diarrhoeal Dis	12	7	5	....	12	11	1	....	....	....	....	....	....	....	....	....	....	....	8
Phthisis.....	32	13	19	21	11	1	....	....	5	10	8	5	2	....	....	1	....	..	29
Other tubercular Diseases.	15	6	9	6	9	2	3	....	3	3	2	1	....	1	....	....	....	....	12
Malarial Fever	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Nerv. System.	45	22	23	10	35	25	7	....	1	3	1	....	5	1	2	....	....	....	46
Heart Disease.	23	11	12	16	7	2	2	....	2	1	....	1	3	6	2	4	....	....	14
Bronchitis.....	17	10	7	6	11	11	....	....	....	....	....	1	1	1	2	1	....	....	15
Pneumonia...	14	8	6	5	9	2	3	1	1	....	2	2	1	2	....	....	....	....	27
Other diseases of Resp. Org.	5	3	2	3	2	2	....	....	....	....	1	....	1	....	1	....	....	....	6
Diseases of Digestive Syst.	20	9	11	8	12	4	4	....	3	2	3	1	....	1	2	....	....	....	20
Urinary Syst..	13	8	5	9	4	1	2	....	1	....	1	2	....	2	4	....	....	....	9
Congenital Debility.*	33	20	13	....	33	33	....	....	....	....	....	....	....	....	....	....	....	....	20
Old Age.	13	5	8	13	....	....	....	....	....	....	....	....	....	1	2	9	1	....	13
Suicides.....	6	5	1	4	2	....	....	....	1	....	3	1	1	....	....	....	....	....	3
Other violent deaths.	15	10	5	6	9	....	1	3	2	1	1	2	2	...	1	1	1	....	13
All other causes.	39	15	24	27	12	3	5	1	1	4	7	5	3	4	4	2	...	....	36

*Including Premature Births, Atrophy, Inanition, Infantile Debility, Marasmus, Atelectasis and Preternatural Births.

TABLE No. 7.

Showing the Reported Mortality, according to Cause, Age, Sex and Social Condition for the month of June, 1896.

The Annual Death Rate per 1,000 for the month was 12.09 on an estimated population of 255,000.

During the month there were 3 deaths less than for the corresponding month of 1895.

	Total.	Males.	Females.	Married.	Single.	Under 1 year.	From 1 to 5 yrs.	5 to 10 years.	10 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	70 to 80 years.	80 to 90 years.	90 to 100 years.	Over 100 years.	Total same month last year.
Tot'l all causes	257	145	112	93	164	95	22	9	14	22	25	9	13	21	16	8	3	....	260
Diphtheria ...	5	2	3	....	5	....	3	1	1	....	....	....	....	....	....	....	....	....	3
Croup.....	....	...	...	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Scarlet Fever.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Typhoid Fever	2	1	1	1	1	....	....	1	....	....	1	....	....	....	....	....	....	....	4
Small-pox.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Typhus Fever.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Measles.....	1	1	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....
Wh'p'gCough.	1	....	1	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	7
Diarrhoeal Dis	19	10	9	....	19	16	3	....	....	....	....	....	....	....	....	....	....	....	16
Phthisis.....	21	11	10	11	10	....	....	....	1	9	7	3	1	....	....	....	....	....	25
Other tubercular Diseases.	12	6	6	4	8	3	....	1	2	1	4	1	....	....	....	....	....	....	12
Malarial Fever	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Nerv. System.	30	17	13	7	23	21	1	....	....	2	2	....	2	1	....	1	....	....	29
Heart Disease.	15	3	12	11	4	....	....	2	1	....	2	...	3	4	2	1	....	....	19
Bronchitis.. ..	7	3	4	....	7	4	2	....	....	....	....	....	....	....	....	1	....	....	9
Pneumonia ...	7	5	2	3	4	2	1	1	...	....	....	....	1	2	....	....	....	....	13
Other diseases of Resp. Org.	9	7	2	3	6	3	1	....	1	1	....	....	....	1	2	....	....	....	7
Diseases of Digestive Syst.	25	16	9	10	15	10	4	...	1	....	2	....	1	3	3	....	1	....	21
Urinary Syst..	9	7	2	6	3	....	....	....	1	2	1	...	....	....	3	1	1	....	11
Congenital Debility.*	28	17	11	....	28	27	1	....	....	....	....	....	....	....	....	....	....	....	27
Old Age.....	6	3	3	6	....	....	....	....	....	....	....	....	....	...	3	3	....	....	13
Suicides	5	5	...	3	2	....	....	....	1	...	1	1	1	1	...	....	....	...	4
Other violent deaths.	16	11	5	4	12	....	6	1	4	2	....	1	....	1	1	....	...	....	11
All other causes.	39	20	19	24	15	7	....	2	1	5	5	3	4	8	2	1	1	....	28

*Including Premature Births, Atrophy, Inanition, Infantile Debility, Marasmus, Atelectasis and Preternatural Births.

TABLE No. 8.

Showing the Reported Mortality, according to Cause, Age, Sex and Social Condition for the month of July, 1896.

The Annual Death Rate per 1,000 for the month was 19.20 on an estimated population of 260,000.

During the month there were 90 deaths more than for the corresponding month of 1895.

	Total.	Males.	Females.	Married.	Single.	Under 1 year.	From 1 to 5 yrs.	5 to 10 years.	10 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	70 to 80 years.	80 to 90 years.	90 to 100 years.	Over 100 years.	Total same month last year.
Tot'l all causes	416	211	205	132	284	210	34	12	9	30	23	13	24	21	23	15	2	....	326
Diphtheria....	9	4	5	....	9	....	5	4	....	....	....	....	....	....	....	....	....	....	2
Croup.	3	1	2	....	3	....	3	....	....	....	....	....	....	....	....	....	....	....	6
Scarlet Fever..	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Typhoid Fever	3	2	1	3	....	....	....	....	....	....	2	....	1	....	....	....	....	....	2
Small-pox.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Typhus Fever.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Measles.....	1	....	1	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....
Wh'p'gCough.	3	1	2	....	3	2	1	....	....	....	....	....	....	....	....	....	....	....	2
Diarrhoeal Dis	90	44	46	3	87	82	5	....	....	....	....	....	....	1	2	....	....	....	72
Phthisis.....	28	11	17	18	10	....	....	....	3	14	7	3	....	....	1	....	....	....	18
Other tubercular Diseases.	7	4	3	2	5	1	1	....	....	3	1	....	....	....	1	....	....	....	6
Malarial Fever	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Nerv. System.	46	17	29	13	33	25	5	2	....	....	2	....	5	2	2	3	....	....	35
Heart Disease.	20	9	11	15	5	2	....	....	2	1	3	4	3	3	2	....	....	....	14
Bronchitis	23	10	13	4	19	14	5	....	....	....	....	....	....	....	3	1	....	....	4
Pneumonia ...	8	7	1	2	6	2	4	....	....	....	....	....	....	....	1	....	1	....	10
Other diseases of Resp. Org.	4	2	2	3	1	....	1	....	....	....	....	....	....	1	2	....	....	....	2
Diseases of Digestive Syst.	55	34	21	13	42	35	4	....	1	2	1	2	3	5	2	....	....	....	48
Urinary Syst.	8	5	3	7	1	....	....	1	....	....	1	1	2	1	1	1	....	....	6
Congenital Debility.*	40	16	24	....	40	40	....	....	....	....	....	....	....	....	....	....	....	....	33
Old Age.....	11	3	8	11	....	....	....	....	....	....	....	....	....	....	2	8	1	....	14
Suicides.....	8	8	....	6	2	....	....	....	....	2	1	....	3	....	1	1	....	....	3
Other violent deaths	16	14	2	9	7	....	....	3	1	5	1	2	1	3	....	....	....	....	13
All other causes	33	19	14	23	10	6	....	2	2	3	4	1	6	5	3	1	....	....	35

*Including Premature Births, Atrophy, Inanition, Infantile Debility, Marasmus, Atelectasis and Preternatural Births.

TABLE No. 9.

Showing the Reported Mortality, according to Cause, Age, Sex and Social Condition for the month of August, 1896.

The Annual Death Rate per 1,000 for the month was 19.20 on an estimated population of 260,000.

During the month there were 11 deaths more than for the corresponding month of 1895.

	Total	Males.	Females.	Married.	Single.	Under 1 year.	From 1 to 5 yrs.	5 to 10 years.	10 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	70 to 80 years	80 to 90 years.	90 to 100 years.	Over 100 years.	Total same month last year.
Tot'l all causes	416	222	194	129	287	209	38	12	14	16	27	23	24	26	18	9	....	....	405
Diphtheria....	13	9	4	1	12	1	6	4	1	1	....	....	....	....	....	....	....	....	5
Croup.....	1	1	....	....	1	...	1	....	....	....	....	....	....	....	....	....	....	....	....
Scarlet Fever..	1	1	....	....	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....
Typhoid Fever	4	2	2	3	1	....	....	....	1	....	3	....	....	....	....	....	....	....	4
Small-pox.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Typhus Fever.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Measles.....	1	...	1	....	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....
Wh'p'gCough.	3	1	2	....	3	2	1	....	....	....	....	....	....	....	....	....	....	....	....
Diarrhoeal Dis	97	59	38	2	95	85	10	....	....	1	....	....	....	1	....	....	....	....	116
Phthisis.....	21	12	9	10	11	1	2	....	3	5	6	1	3	....	....	....	....	....	25
Other tubercular Diseases.	5	1	4	2	3	....	2	....	....	1	1	....	1	....	....	....	....	....	12
Malarial Fever	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Nerv. System.	53	25	28	16	37	32	4	1	....	1	....	4	2	3	4	2	....	....	55
Heart Disease.	16	6	10	14	2	....	....	....	....	....	1	4	....	5	4	2	....	....	13
Bronchitis....	16	10	6	6	10	8	1	....	....	....	....	...	3	1	3	....	....	....	5
Pneumonia..	12	4	8	4	8	4	2	....	2	1	1	2	....	....	....	....	....	....	12
Other diseases of Resp. Org.	2	2	....	1	1	....	1	....	....	....	....	1	...	....	....	....	....	....	4
Diseases of Digestive Syst.	45	26	19	13	32	23	4	2	3	1	....	1	3	7	....	1	...	....	50
Urinary Syst..	6	3	3	4	2	1	1	....	....	....	....	1	1	2	....	....	....	....	12
Congenital Debility.*	47	26	21	....	47	46	1	....	....	....	....	...	..	....	....	....	....	....	37
Old Age.....	9	3	6	9	....	....	....	....	....	....	...	....	....	....	5	4	....	..	4
Suicides	6	3	3	4	2	....	....	....	....	1	2	2	1	...	...	....	....	....	4
Other violent deaths.	16	16	....	7	9	1	....	4	2	....	3	1	4	1	....	....	....	....	20
All other causes.	42	12	30	33	9	5	....	1	2	4	10	6	6	6	2	....	....	....	27

*Including Premature Births, Atrophy, Inanition, Infantile Debility, Marasmus, Atelectasis and Preternatural Births.

TABLE No. 10.

Showing the Reported Mortality, according to Cause, Age, Sex and Social Condition for the month of September, 1896.

The Annual Death Rate per 1,000 for the month was 13.34 on an estimated population of 260,000.

During the month there were 54 deaths less than for the corresponding month of 1895.

	Total.	Males.	Females.	Married.	Single.	Under 1 year.	From 1 to 5 yrs.	5 to 10 years.	10 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	70 to 80 years.	80 to 90 years.	90 to 100 years.	Over 100 years.	Total same month last year.
Tot'l all causes	289	158	131	111	178	87	41	14	17	14	26	12	21	20	26	7	4	....	343
Diphtheria....	19	11	8	....	19	2	9	4	4	....	...	....	....	....	....	....	....	....	16
Croup	11	7	4	....	11	2	4	5	....	....	....	....	...	....	....	....	....	....	4
Scarlet Fever.	....	....	....	....	....	....	....	....	....	....	....	...	....	....	....	....	....	....	....
Typhoid Fever	2	2	....	1	1	....	....	....	....	2	....	....	....	....	....	....	....	....	7
Small-pox.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Typhus Fever.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	..	....	....	....
Measles.....	1	....	1	....	1	....	...	....	1	....	....	....	....	....	....	....	....	....	....
Wh'p'gCough.	1	....	1	....	1	1	....	....	..	....	....	....	....	....	....	....	....	....	6
Diarrhoeal Dis	29	17	12	2	27	19	6	1	1	....	1	....	....	1	...	....	....	....	69
Phthisis.....	20	8	12	12	8	....	1	...	3	6	5	1	2	1	1	....	....	....	16
Other tubercular Diseases.	7	5	2	2	5	3	....	....	....	....	2	1	1	....	....	....	....	....	8
Malarial Fever	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...	....	....
Nerv. System.	36	19	17	10	26	17	3	1	5	1	3	1	2	1	4	....	....	....	31
Heart Disease.	18	5	13	17	1	....	1	....	....	2	2	2	3	5	3	....	....	....	5
Bronchitis ...	12	6	6	8	4	3	1	....	....	....	....	....	1	1	3	2	1	....	10
Pneumonia...	12	5	7	4	8	6	2	....	....	....	1	1	....	1	1	....	....	....	7
Other diseases of Resp. Org.	11	4	7	6	5	2	2	....	1	....	....	....	3	....	3	....	....	....	3
Diseases of Digestive Syst	26	13	13	5	21	10	6	2	1	1	2	....	2	2	....	....	....	....	62
Urinary Syst..	9	5	4	7	2	....	....	....	1	....	1	1	....	1	4	1	....	....	11
Congenital Debility.*	25	17	8	....	25	22	3	....	....	....	....	....	...	....	....	....	...	....	39
Old Age.....	9	5	4	8	1	....	....	....	....	....	....	....	....	....	3	3	3	....	5
Suicides	5	5	....	4	1	....	....	....	....	....	1	2	1	1	....	....	....	....	6
Other violent deaths.	14	14	....	6	8	....	2	1	1	2	5	1	1	....	....	1	....	....	13
All other causes.	22	10	12	19	3	....	1	....	1	....	3	2	5	6	4	....	....	....	25

*Including Premature Births, Atrophy, Inanition, Infantile Debility, Marasmus, Atelectatis and Preternatural Births.

TABLE No. 11.

Showing the Reported Mortality, according to Cause, Age, Sex and Social Condition for the month of October, 1896.

The Annual Death Rate per 1,000 for the month was 13.66 on an estimated population of 260,000.

During the month there were 12 deaths less than for the corresponding month of 1895.

	Total.	Males.	Females.	Married.	Single.	Under 1 year.	From 1 to 5 yrs.	5 to 10 years.	10 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	70 to 80 years.	80 to 90 years.	90 to 100 years.	Over 100 years.	Total same month last year.
Tot'l all causes	296	164	132	103	193	72	63	23	8	28	16	12	18	23	23	9	1	....	308
Diphtheria....	34	22	12	....	34	1	19	13	....	1	....	....	....	....	....	....	....	....	14
Croup.....	14	9	5	....	14	1	10	3	....	....	....	....	....	....	....	....	....	....	15
Scarlet Fever.	2	2	....	....	2	....	1	1	....	....	....	....	....	....	....	....	....	....	1
Typhoid Fever	5	3	2	2	3	....	....	1	1	1	1	1	....	....	....	....	....	....	7
Small-pox.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Typhus Fever.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Measles.....	1	1	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....
Wh'p'g Cough.	1	....	1	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	2
Diarrhoeal Dis	8	7	1	1	7	6	1	....	....	....	....	....	....	....	1	....	....	....	17
Phthisis.....	21	10	11	12	9	....	....	....	3	9	5	1	1	2	....	....	....	....	23
Other tubercular Diseases.	7	4	3	1	6	1	....	....	2	3	1	....	....	....	....	....	....	....	9
Malarial Fever	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Nerv. System.	37	19	18	11	26	15	8	....	....	1	....	....	3	1	8	1	....	....	35
Heart Disease.	7	1	6	6	1	....	....	....	....	....	1	....	1	3	2	....	....	....	13
Bronchitis....	18	10	8	4	14	7	6	....	1	....	....	....	1	1	....	1	1	....	5
Pneumonia...	19	12	7	5	14	2	8	2	....	2	2	1	1	1	....	....	....	....	16
Other diseases of Resp. Org.	9	5	4	6	3	1	2	....	....	....	....	1	....	4	....	1	....	....	8
Diseases of Digestive Syst.	13	7	6	7	6	5	1	....	....	....	1	....	....	2	3	1	....	....	39
Urinary Syst..	11	4	7	10	1	....	....	1	....	3	....	....	3	1	2	1	....	....	12
Congenital Debility.*	31	15	16	....	31	31	....	....	....	....	....	....	....	....	....	....	....	....	33
Old Age.....	6	2	4	6	....	....	....	....	....	....	....	....	....	....	3	3	....	....	8
Suicides	4	4	....	4	....	....	....	....	....	....	....	....	3	1	....	....	....	....	1
Other violent deaths.	20	16	4	10	10	1	4	1	....	3	2	4	2	1	1	1	....	....	17
All other causes.	28	11	17	18	10	....	3	....	1	5	2	4	3	6	3	....	....	....	33

*Including Premature Births, Atrophy, Inanition, Infantile Debility, Marasmus, Atelectasis and Preternatural Births.

TABLE No. 12.

Showing the Reported Mortality, according to Cause, Age, Sex and Social Condition for the month of November, 1896.

The Annual Death Rate per 1,000 for the month was 14.54 on an estimated population of 260,000.

During the month there were 40 deaths more than for the corresponding month of 1895.

	Total.	Males.	Females.	Married.	Single.	Under 1 year.	From 1 to 5 yrs.	5 to 10 years.	10 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	70 to 80 years.	80 to 90 years.	90 to 100 years.	Over 100 years.	Total same month last year.
Tot'l all causes	315	163	152	125	190	104	44	20	9	26	23	23	21	18	18	7	2	....	275
Diphtheria....	22	6	16	....	22	2	10	9	1	....	....	....	....	....	....	....	....	....	15
Croup	2	....	2	....	2	...	1	....	1	....	....	....	....	....	....	....	....	....	7
Scarlet Fever.	1	1	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....
Typhoid Fever	4	1	3	1	3	....	....	2	1	....	....	....	....	....	1	....	....	...	7
Small-pox.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Typhus Fever.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Measles.....	7	4	3	....	7	1	6	....	....	....	....	....	....	....	....	....	....	....	....
Wh'p'gCough.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2
Diarrhoeal Dis	11	5	6	....	11	11	....	....	....	....	....	....	....	....	....	....	....	....	4
Phthisis..... ..	36	17	19	24	12	1	....	1	2	15	8	7	2	....	....	....	....	....	28
Other tubercular Diseases.	4	3	1	1	3	....	2	....	1	....	....	....	1	....	....	....	....	....	7
Malarial Fever	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Nervous Syst..	43	26	17	11	32	24	7	1	....	....	2	1	2	3	1	1	1	....	31
Heart Disease.	13	8	5	11	2	....	....	....	1	....	1	3	1	2	4	....	1	....	15
Bronchitis	24	14	10	7	17	14	2	1	....	....	....	....	1	....	2	4	....	....	12
Pneumonia .	23	9	14	10	13	2	9	1	....	2	2	3	1	2	1	....	....	....	26
Other Diseases of Resp. Org.	4	3	1	2	2	....	1	....	1	....	....	....	....	2	....	....	....	....	11
Diseases of Digestive Syst.	26	18	8	12	14	8	4	2	....	1	2	4	1	1	3	....	....	....	27
Urinary Syst..	11	4	7	7	4	....	1	2	....	....	1	....	3	2	2	....	....	....	3
Congenital debility.*	37	22	15	....	37	37	....	....	....	....	....	....	....	....	....	....	....	...	18
Old Age.....	5	1	4	5	....	....	....	....	....	....	....	....	....	....	3	2	....	...	10
Suicides.....	7	6	1	7	....	....	....	....	....	1	2	....	3	1	....	....	....	...	10
Other violent deaths	8	7	1	4	4	1	1	....	1	2	1	2	....	....	....	....	....	....	10
All other causes.	27	8	19	23	4	3	....	....	....	5	4	3	6	5	1	....	....	....	32

*Including Premature Births, Atrophy, Inanition, Infantile Debility, Marasmus, Atelectasis and Preternatural Births.

TABLE No. 13.

Showing the Reported Mortality, according to Cause, Age, Sex and Social Condition for the month of December, 1896.

The Annual Death Rate per 1,000 for the month was 15.92 on an estimated population of 260,000.

During the month there were 69 deaths more than for the corresponding month of 1895.

	Total.	Males.	Females.	Married.	Single.	Under 1 year.	From 1 to 5 yrs.	5 to 10 years.	10 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	70 to 80 years.	80 to 90 years.	90 to 100 years.	Over 100 years.	Total same month last year.
Tot'l all causes	345	179	166	146	199	81	63	20	14	22	26	22	22	33	31	10	1	.. .	276
Diphtheria....	25	9	16	1	24	....	16	8	....	1	....	....	....	....	....	....	....	....	11
Croup.....	5	2	3	....	5	....	4	1	...	....	....	....	....	....	....	....	....	....	8
Scarlet Fever.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2
Typhoid Fever	4	1	3	2	2	....	....	....	1	1	1	1	....	....	....	....	....	....	7
Small-pox.....	....	....	....	....	...	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Typhus Fever.	....	....	....	....	....	....	....	....	....	..	....	....	....	....	....	....	....	....	....
Measles.	17	12	5	....	17	7	9	1	....	....	....	....	....	....	....	....	....	....	....
Wh'p'gCough.	....	....	....	....	....	....	....	....	...	....	....	....	....	....	....	....	....	....	....
Diarrhoeal Dis	4	3	1	....	4	4	....	....	....	....	....	....	....	....	....	...	.. ..	....	6
Phthisis	35	15	20	23	12	....	1	....	6	9	8	4	3	2	2	....	....	....	19
Other tubercular Diseases.	7	4	3	2	5	....	2	1	1	1	1	....	....	1	....	....	....	....	11
Malarial Fever	....	....	....	....	....	....	....	...	....	....	....	....	....	....	....	....	....	....	....
Ner. System..	46	21	25	17	29	16	7	1	2	1	2	1	2	7	7	....	....	...	38
Heart Disease.	18	10	8	16	2	1	....	....	....	....	1	4	3	5	3	1	....	....	21
Bronchitis	23	13	10	4	19	16	3	....	....	....	...	....	1	....	1	1	1	....	12
Pneumonia ...	46	27	19	18	28	7	14	4	2	2	4	1	2	4	3	3	....	....	11
Other Diseases of Resp. Org.	9	6	3	5	4	1	1	2	....	....	....	....	2	1	2	....	....	....	8
Diseases of Digestive syst	23	11	12	10	13	6	2	1	1	....	3	2	3	2	3	....	....	...	20
Urinary Syst..	13	10	3	9	4	2	....	1	....	1	1	1	....	3	4	....	....	....	11
Congenital Debility.*	21	9	12	....	21	21	....	....	....	...	....	....	....	....	....	...	....	....	28
Old Age.....	6	3	3	6	....	....	....	....	....	....	....	....	....	1	3	2	....	....	7
Suicides.....	4	3	1	3	1	....	...	....	....	....	....	1	1	1	....	1	....	....	3
Other violent deaths.	10	7	3	4	6	....	4	....	....	1	2	2	....	1	....	....	....	....	11
All other causes.	29	13	16	26	3	....	....	....	1	5	3	5	5	5	3	2	....	....	42

*Including Premature Births, Atrophy, Inanition, Infantile Debility, Marasmus, Atelectasis and Preternatural Births.

TABLE No. 14.

Showing Deaths from Zymotic Diseases, Total Deaths and Population by Wards, also Annual Death Rate by Wards.

WARDS.	Diphtheria, including Membranous Croup	Scarlet Fever.	Measles.	Typhoid fever.	Diarrhoeal diseases.	Tubercular diseases.	Total deaths from all causes.	Population estimated.	Annual death rate per thousand.
First	1	....	....	2	2	11	91	9,913	9 18
Second	6	....	1	3	6	24	150	10,276	14.59
Third	1	....	...	1	3	11	95	4,984	19.06
Fourth	4	....	....	2	1	18	127	10,193	12 46
Fifth	8	2	....	...	10	12	138	10,042	13.74
Sixth	11	1	....	....	12	22	193	14,037	13.75
Seventh	1	....	....	....	2	3	81	6,871	11.78
Eighth	14	....	....	....	11	26	194	16,288	11.92
Ninth	16	....	3	4	20	36	223	17,660	12.63
Tenth	21	....	1	1	14	42	248	16,741	14.81
Eleventh	36	....	1	....	16	33	317	19,443	16.31
Twelfth	12	....	....	....	13	22	192	12,022	15.97
Thirteenth	20	....	2	2	13	32	241	15,955	15.11
Fourteenth	28	....	3	7	39	19	333	17,881	18.62
Fifteenth	7	....	4	1	11	16	128	11,497	11.13
Sixteenth	8	....	....	1	2	12	94	8,063	11 66
Seventeenth	15	....	3	2	10	11	124	9,261	13.39
Eighteenth	7	1	2	7	20	12	167	11,600	14.39
Nineteenth	11	....	3	7	22	24	182	14,011	12.98
Twentieth	13	....	3	....	15	15	160	13,557	11.80
Twenty-first	13	....	3	....	8	18	152	9,705	15.66
Hospitals, etc.	1	...	....	6	48	26	274	.....	.....
Total	254	4	29	46	298	445	3,904	260,000	15.00

TABLE No. 15.

Showing Deaths from Five Principal Zymotic Diseases, and Total Deaths in the various Hospitals and Public Institutions in the City, for the Year 1896.

HOSPITALS, INSTITUTIONS, ETC.	Diphtheria, including Membranous Croup	Scarlet Fever.	Measles.	Typhoid Fever.	Diarrhoeal Diseases.	Tubercular Diseases.	Total Deaths.
Children's Hospital	.....	.....	.....	.....	.....	4	4
Elms Hospital	.....	.....	.....	.....	.....	.....	3
Johnson Emergency Hospital	.....	.....	.....	....	.....	.....	20
House of Correction	.....	.....	.....	.....	.....	1	3
House of Mercy	.....	.....	.....	.....	1	.....	3
Infants' Home	.....	.....	.....	.....	.....	2	15
City Isolation Hospital	1	.....	.....	.....	.....	.....	1
Industrial School for Girls	.....	.....	.....	.....	.....	1	1
Little Sisters of the Poor	.....	.....	.....	.....	.....	1	16
Manchester Brown Hospital	.....	.....	.....	.....	.....	1	3
St. Joseph's Hospital	.....	.....	.....	.....	.....	2	8
St. Mary's Hospital	.....	.....	.....	3	.....	4	24
St. Vincent's Orphan Asylum	.....	.....	.....	.....	47	.....	78
Trinity Hospital	.....	.....	.....	.....	.....	.....	17
Wisconsin General Hospital	.....	.....	.....	1	.....	2	19
Notre Dame Convent	.....	.....	.....	.....	.....	6	10
Milwaukee Hospital	.....	.....	.....	2	.....	4	32
Presbyterian Hospital	.....	.....	.....	.....	.....	.....	9
Protestant Home for Aged	.....	.....	.....	.....	.....	.....	7
St. Rose Orphan Asylum	.....	.....	.....	.....	.....	1	1
Total	1	.....	.....	6	48	26	274

TABLE No. 16.

Showing Nativity of Decedents, by Months, for the Year 1896.

PLACE OF BIRTH.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Milwaukee	155	146	150	167	169	139	261	276	156	175	176	174	2,144
Wisconsin, outside of Milwaukee	17	9	6	16	16	8	22	13	9	6	20	16	158
Other, of the United States	23	20	21	22	18	21	15	26	18	17	13	29	243
Canada	3	2	1	.....	1	4	5	2	1	1	.....	.....	20
Great Britain and Ireland	17	12	14	7	9	12	16	13	13	8	11	12	144
Germany	74	95	91	88	73	53	72	68	79	69	68	85	915
Poland	7	9	11	10	10	6	14	9	9	6	15	14	120
Other European Countries	9	9	15	6	18	11	6	6	2	14	10	13	119
Unknown or not stated	3	5	4	6	6	3	5	3	2	.....	2	2	41
Total	308	307	313	322	320	257	416	416	289	296	315	345	3,904

TABLE No. 17.

Showing the Disposition made of Decedents in the various Cemeteries, etc. This does not include Still Births nor Bodies brought into the City for Burial.

CEMETERY, ETC.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Union....	72	88	83	82	79	56	91	129	72	82	88	93	1,015
Forest Home....	60	53	37	45	57	50	69	73	36	52	44	58	634
Calvary.....	74	68	81	86	75	52	102	81	67	62	69	71	888
Polish Union ...	32	29	37	32	28	30	57	50	35	28	43	41	442
Pilgrim s Rest...	19	22	26	18	22	26	35	21	25	35	24	25	298
Wanderer's Rest	11	5	6	14	10	7	13	14	16	7	4	9	116
Trinity.....	5	7	9	10	14	3	18	12	11	13	12	14	128
Greenwood.....	1	2	2	.....	.....	1	1	.....	....	1	.....	.....	8
Spring Hill	4	2	2	2	2	1	2	2	2	2	.....	1	22
Second Home..	2	1	1	1	3	3	2	6	2	.....	4	6	31
County Poor Cemetery.	3	4	2	6	4	3	4	7	2	1	4	1	41
Outside of Milwaukee.	24	26	25	26	25	25	22	21	20	13	22	25	274
For Anatomical Purposes.	1	.....	2	.....	1	.....	.....	.....	1	.....	1	1	7
Total.....	308	307	313	322	320	257	416	416	289	296	315	345	3,904

TABLE No. 18.

Showing the Disposition in the various Cemeteries, etc., of Still-born Children and Bodies brought to the City for Burial; also total number of Burial Permits Issued.

CEMETERY, ETC.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	Grand total of Burial Permits for the Year.
Union	19	25	16	11	18	12	16	17	12	18	13	23	201	1,216
Forest Home	12	7	21	12	14	14	16	17	13	17	16	16	175	809
Calvary	9	13	13	13	7	12	5	17	12	15	10	6	132	1,020
Polish Union	7	5	5	3	1	3	5	6	2	4	2	6	49	491
Pilgrim's Rest	1	3	5	3	10	4	3	3	4	4	4	2	46	344
Wanderer's Rest	2	....	2	1	....	2	1	....	2	2	2	2	16	132
Trinity	1	...	3	1	1	5	2	1	1	....	2	...	17	145
Greenwood	....	1	....	....	....	....	1	....	1	...	1	2	6	14
Spring Hill	....	2	1	1	1	...	....	....	1	1	....	...	7	29
Second Home	....	....	1	....	1	....	....	....	3	1	1	....	7	38
County Poor Cemetery	1	3	3	1	2	2	4	2	2	....	1	2	23	64
Outside of Milwaukee	2	3	1	2	1	4	4	3	3	2	3	7	35	309
For Anatomical purposes	....	...	....	....	....	..	....	....	....	....	1	1	2	9
Total	54	62	71	48	56	59	57	66	56	64	56	67	716	4,620

TABLE No. 19.

Showing for Years 1892 to 1896, inclusive, Deaths and Per Cent of Total Deaths from Diarrhoeal Diseases, and Diseases of the Digestive System, in Children under 5 years of Age.

YEAR.	Total Deaths from all causes.	All Causes.				Diarrhoeal Diseases.		Diseases of Digestion.		Combined Diarrhoeal and Digestive.	
		Under 1 Year.		Under 5 Years.		Under 5 Years.		Under 5 Years.		Under 5 Years.	
		Deaths.	Per cent. of tot'l deaths	Deaths.	Per cent. of tot'l deaths	Deaths.	Per cent. of tot'l deaths	Deaths.	Per cent. of tot'l deaths	Deaths.	Per cent. of total deaths.
1892	4,516	1,479	32.75	2,223	49.22	356	7.88	166	3.67	522	11.56
1893	4,462	1,653	37.04	2,317	51.93	468	10.49	241	5.40	709	15.89
1894	4,253	1,441	33.88	2,091	49.16	341	8.01	192	4.28	533	12.53
1895	3,885	1,339	34.46	1,825	47.00	309	7.95	208	5.35	517	13.31
1896	3,904	1 297	33.22	1,791	45.87	288	7.37	182	4.66	470	12.04

TABLE No. 20.

Showing, by Months, the Reported Cases of Contagious Diseases, Births, Deaths, etc., for the Year 1896.

MONTHS.	Cases Diphtheria.	Cases Scarlet Fever.	Cases Typhoid Fever.	Cases Measles.	Admissions to Isolation Hospital.	Births Reported.	Deaths Reported.	Annual Death Rate.	Still Births Reported.	Bodies Brought to City.	Burial Permits Issued.	Transit Permits Iss'd.	Transcripts Issued.	Deaths Investigated by Department.	Deaths Reported by Coroner.
January	95	18	23	.....	5	641	308	*14.49	33	21	362	18	22	6	11
February	65	13	10	1	1	588	307	14.44	31	31	369	22	15	9	8
March	43	14	4	1	1	796	313	14.73	36	35	384	19	20	10	17
April	32	9	6	2	1	631	322	15.15	26	22	370	18	16	14	12
May	40	7	2	4	1	607	320	15.06	31	25	376	15	17	8	22
June	39	6	6	12	2	616	257	12.09	32	27	316	23	18	18	21
July	27	4	7	6	.....	636	416	*19 20	24	33	473	21	24	27	26
August	47	7	12	3	1	673	416	19.20	29	37	482	13	22	36	25
September	117	8	16	2	1	630	289	13.34	27	29	345	15	24	20	23
October	172	10	29	40	1	824	296	13.66	29	35	360	13	15	31	25
November	116	10	10	67	.....	577	315	14.54	25	31	371	19	13	32	19
December	126	14	8	143	7	636	345	15.92	31	36	412	24	20	29	14
Total	919	120	133	281	21	7,855	3,904	15.00	354	362	4,620	220	226	240	223

*Death rate for first six months, based on a population of 255,000, for the last six months, on a population of 260,000.

TABLE No. 21.

Showing the Estimated Population and Annual Death Rate for the Year 1896, of fourteen principal cities of the United States and twenty-eight foreign cities, as compiled from official reports to the Supervising Surgeon-General U. S. A. and the Registrar-General of Great Britain.

CITY.	Estimated Population.	Annual Death Rate.	CITY.	Estimated Population.	Annual Death Rate.
Buffalo	350,000	13.8	Rome	483,000	19.1
Chicago	1,600,000	14.5	Turin	344,000	19.0
Cleveland	330,000	14.7	Baltimore	506,400	19.5
Milwaukee	260,000	15.0	Philadelphia	1,164,000	19.8
Frankfort-on-the-Main	238,000	15.6	Dresden	346,000	19.9
La Hague	494,000	16.3	Brooklyn	1,100,000	20.0
Stockholm	274,600	16.8	Glasgow	715,000	20.4
Copenhagen	334,000	16.8	Washington	280,800	20.8
Cincinnati	350,000	16.9	New York	1,900,000	21.4
Edinburgh	292,000	16.9	Vienna	1 542,000	22.3
Genoa	212,000	17.0	Boston	507,000	22 5
St. Louis	560,000	17.3	Munich	418,000	23.2
Amsterdam	496,000	17.4	Venice	165,000	25.0
Hamburg	626,000	17.5	Breslau	380,000	25 1
San Francisco	330,000	17.7	Buda-Pesth	560,000	25.4
Berlin	1,725,000	17.9	New Orleans	275,000	27.4
Brussels	508,000	18.2	St. Petersburg	1,267.000	30.9
London	6,200,000	18.6	Calcutta	681,000	33.0
Rotterdam	289,000	18.6	Bombay	822,000	41.5
Nice	106,700	18.6	Alexandria	231,000	42.4
Paris	2,512,000	19.0	Cairo	375,000	55.2

TABLE No. 22—BIRTHS.

Showing Reported Births, as to Color, Sex, and by whom reported, by Months, for the Year 1896.

MONTHS.	Total Births Reported.	Males.	Females.	White.	Colored.	Reported by Physicians.	Reported by Midwives.
January	641	333	308	641	.....	114	527
February	588	300	288	588	.....	70	518
March	796	430	366	795	1	121	675
April	631	323	308	631	.....	111	520
May	607	326	281	607	.....	136	471
June	616	339	277	616	.....	119	497
July	636	311	325	635	1	108	528
August	673	332	341	670	3	135	538
September	630	328	302	630	.....	97	533
October	824	425	399	824	.....	171	653
November	577	316	261	575	2	117	460
December	636	312	324	634	2	111	525
Total	7,855	4,075	3,780	7,846	9	1,410	6,445

REPORT OF SECRETARY.

Walter Kempster, M. D., Commissioner of Health:

DEAR SIR—The following is a list of the receipts and expenditures of the Health Department from Jan. 1, 1896, to Dec. 31, 1896:

RECEIPTS.

Balance on hand Jan. 1, 1896	$492 32	
Appropriation	109,000 00	
Cash receipts	1,432 50	
		$110,924 82

EXPENDITURES.

For collecting and disposing of garbage	$72,250 00*	
For salaries	25,917 20	
For sundries and disbursement	4,617 76	
Total cost of Health Department for year 1896		$102,784 96
Balance on hand December 31, 1896		$8,139 86

*City holding back $2,750.00.

The following is an itemized statement of expenditures:

1896.			
Jan.	6.	Chas. Baumbach Co., drugs	$6 13
		Wm. Frankfurth Co., tacks	70
		Ed. Keogh, printing	6 81
	8.	F. F. Wilde, postage stamps	10 00
	20.	F. E. Cotzhausen, rent, Nov. 1 to Feb. 1	210 00
		Ed. Keogh, printing	15 24
Feb.	1.	January pay roll	1,894 90
	3.	Edison Elec. Ill. Co., lighting offices, fourth quarter	12 53
		Fred Nohl, janitor	6 00
		Fred Reiski, milk, December	5 65
		Fred Reiski, milk, November	3 15

Feb.	3.	Truax, Greene & Co., vaccine	12 60
		H. H. West Co., books	3 50
		Wisconsin Rendering Co., removing garbage, January.	6,166 66
	13.	F. F. Wilde, stamps	15 00
	17.	Adams Stamp & Stencil Co., seal	2 50
		Chas. Baumbach Co., drugs	13 24
		Boynton Livery Co., horse board, October	40 35
		L. Henes, Jr., coal	45 81
		L. Henes, Jr., coal	82 85
		D. R. Jones, drugs	4 65
		D. R. Jones, drugs	6 75
		Fred Nohl, janitor, December	6 00
		Fred Reiski, milk, January	5 85
		C. Rostadt, provisions, November	16 45
		C. Rostadt, provisions, December	22 46
		Spiegel & Co., vaccine points	19 63
		Spiegel & Co., antitoxine	55 48
		H. H. West Co., stationery	39 99
Mch.	2.	Boynton Livery Co., boarding team, November	37 50
		C. Rostadt, provisions, January	27 15
		H. H. West Co., stationery	4 10
		Wisconsin Rendering Co., removing garbage, February.	6,166 66
	3.	February pay roll	2,108 21
	9.	F. F. Wilde, postage stamps	11 00
	16.	L. Henes, Jr., coal	61 08
		Wisconsin Telephone Co., telephone rental, Jan. 1 to April 1, 1896	127 00
		Ed. Keogh, printing	130 93
	23.	Wisconsin Rendering Co., removing garbage, February	6,166 66
Apr.	1.	Wm. Meyer & Son, horse board, December and January	94 00
		March pay roll	2,038 23
		March pay roll	65 00
	3.	Wm. Meyer & Son, horse board, February	39 00
		C. H. Ormond, horse medicine	50
		F. Reiski, milk	8 45
		C. Rostadt & Co., provisions	26 26
		Spiegel & Co., antitoxine	19 12
		Spiegel & Co., vaccine virus	7 56
		H. Sekowsky, repairing syringe	90
		H. H. West Co., stationery	8 75
		Razall Mfg. Co., books	12 75
		F. W. Cotzhausen, rent of offices, Metropolitan Block, February, March and April	160 00
		Ed. Keogh, printing	25 15

Apr.	15.	F. F. Wilde, stamps	10 00
	27.	Chas. Baumbach Co., sulphur, etc	11 95
		Louis Henes, Jr., coal	67 58
		Louis Henes, Jr., coal	61 08
		D. R. Jones, laboratory supplies	2 25
		D. R. Jones, peppermint, etc	5 65
		Mil. Elec. Ry. & L. Co., lighting at Metropolitan Block.	2 75
		Wm. Meyer & Son, boarding team	36 00
		C. Rostadt & Co., groceries	18 69
		F. Reiski, milk	4 20
		Spiegel & Co., antitoxine and vaccine	11 00
		Wisconsin Telephone Co., rental, April, May and June.	50 00
		H. H. West Co., ink	1 00
		H. H. West Co., pencil sharpener	1 05
		H. H. West Co., stationery	7 50
		Wisconsin Rendering Co., removing garbage, April	6,166 66
May	1.	April pay roll	2,038 23
		April pay roll	94 62
	11.	Louis Henes, Jr., coal	91 62
		D. R. Jones, drugs	2 67
	13.	Wm. A. Diederichsen, stamps	10 00
		Wm. J. Fiebrantz, stamped envelopes	10 90
	25.	Adams Stamp & Stencil Co., ribbon	25
		H. Meyer & Son, boarding team	40 00
		C. Rostadt & Co., groceries	11 75
		Spiegel & Co., vaccine virus	21 99
		Wisconsin Rendering Co., removing garbage, May	6,166 66
		H. H. West Co., stationery	9 01
		Wisconsin Lakes Ice & Cartage Co., ice, June 1 to June 1, 1896	17 10
June	1.	May pay roll	2,038 23
		May pay roll	81 66
	8.	D. R. Jones, drugs	3 40
		D. R. Jones, drugs	5 50
		Ed. Keogh, printing	4 07
		Meyer & Son, boarding team	36 00
		Spiegel & Co., drugs	7 08
	9.	Wm. J. Fiebrantz, stamps	10 00
	22.	Shorse & Co., supplies	190 90
		D. R. Jones, drugs	7 15
		Ed. Keogh, printing	45 45
		Dr. H. McKee, visiting and horse medicine	2 00
		T. H. Moffit, milk bottles	3 00
		Meyer & Son, boarding team	12 00

June	22.	C. Rostad & Co., groceries	18 83
		H. H. West Co., stationery	35
		H. H. West Co., stationery	10 00
		Wisconsin Rendering Co., removing garbage, June	6,166 66
		Chas. Baumbach Co., sulphur	3 50
		Cornish, Curtis & Green Co., testing bottles	8 78
		Gibbs Electric Co., motor and stand	78 50
		L. Henes, Jr., wood	6 50
		D. R. Jones, drugs	8 25
		D. R. Jones, drugs	7 00
		D. R. Jones, drugs	2 65
		Ed. Keogh, printing	20 71
	27.	F. Bendel, groceries	13 15
		W. Kempster, for contingent expenses	100 00
July	1.	June pay roll	2,038 23
		June pay roll	81 66
	6.	A. E. Kuolt, express charges advanced	14 10
		F. Reiske, milk	3 05
		Spiegel & Co., vaccine virus	4 40
		H. H. West Co., books	11 50
		H. H. West Co., stationery	6 13
		Wm. Diederichsen, stamps	10 00
	20.	Chas. Baumbach Co., sulphur, etc	8 18
		Chas. Baumbach Co., sulphur, etc	4 70
		D. R. Jones, drugs	2 00
		D. R. Jones, drugs	1 40
		Ed. Keogh, printing	29 02
		Library Bureau, index cards	28 60
		A. G. Wright, city directory	5 00
		Ed. Keogh, printing	30 48
		C. Rostad & Co., groceries	14 99
		F. Reiske, milk	4 05
		Wisconsin Rendering Co., removing garbage, July	6,333 33
	25.	Jos. Mentkowsky, meat confiscated during prevalence of contagious diseases	51 05
Aug.	1.	July pay roll	2,062 18
		July pay roll	81 66
	17.	Ed. Keogh, printing	21 72
		F. Reiske, milk	4 05
		Rohn & Meyer, electrical work	13 80
		Shorse & Co., laboratory supplies	38 20
		Shorse & Co., supplies	188 45
		H. H. West Co., books	10 00
		H. H. West Co., stationery	15 85

Aug.	17.	Wm. Willer, screens	50
	31.	C. Rostadt & Co., groceries	15 99
		F. Reiske, milk	3 50
		Shorse & Co., mechanical stage	30 00
		Spiegel & Co., antitoxine	11 77
Sept.	1.	August pay roll	2,114 89
		August pay roll	81 66
	14.	Ed. Keogh, printing	9 10
		I. Ladoff, scale	55 00
		S. H. Meadows, supplies	19 97
		Wm. A. Diederichsen, stamps	12 00
	19.	M. Meyer, meat confiscated during prevalence of contagious disease	33 65
	28.	Ed. Keogh, printing	56 29
		C. Rostad & Co., groceries	13 18
		Wisconsin Telephone Co., toll service	60
		C. Abresch, ladder hooks, etc	1 25
		C. Baumbach Co., copperas	1 44
	19.	W. Frankfurth & Co., hardware	17 00
		S. H. Meadows, drugs	101 31
Oct.	1.	September pay roll	2,114 89
		September pay roll	81 66
		Wm. A. Diederichsen, stamps	53 80
	12.	H. G. Razall Mfg. Co., books	6 00
		Ed. Keogh, 500 annual reports	493 77
		Wm. Diederichsen, stamps	10 00
	19.	Wisconsin Rendering Co., collecting and transporting garbage, August	3,583 33
		Wisconsin Rendering Co., collecting and disposing of garbage, August and September	6,333 33
	26.	C. Baumbach Co., drugs	7 39
		E. T. Doyn, plumbing	15 00
		Ed. Keogh, printing	190 17
		C. Reiske, milk	3 40
		C. Rostad & Co., groceries	13 75
		Spiegel & Co., vaccine, etc	40 74
		O. A. Thiele, supplies	6 70
		O. A. Thiele, supplies	7 20
		Wisconsin Telephone Co., rental	50 00
		Wisconsin Rendering Co., removing garbage, October	6,333 33
Nov.	2.	October pay roll	2,114 89
		October pay roll	81 66
		Hy. Klein, making gate at crematory	11 51
	9.	Wm. Frankfurth, tacks	1 25

Nov.	9.	Hoffmann & Billings Mfg. Co., repairs	55
		C. Reiske, milk	3 53
		C. Rostad & Co., groceries	16 73
		Spiegel & Co., sundries	48 39
		Wisconsin Telephone Co., toll service	3 00
		I. Ladoff, services	66 66
	19.	Wm. A. Diederichsen, stamps	14 00
		Wisconsin Rend'ring Co., removing garbage, November	6,333 33
Dec.	1.	November pay roll	2,114 89
		November pay roll	81 66
		P. Pittelkow, lock gate at crematory	11 50
	7.	Chas. Baumbach Co., drugs	6 48
		Devos & Whitnall, coal	32 00
		W. A. Diederichsen, stamps	10 00
		C. E. Lammert, railroad fare advanced	5 00
		S. H. Meadows, drugs	28 91
		S. H. Meadows, drugs	19 22
		F. Reiske, milk	4 20
		Richards & Co., apparatus	42 20
		Scoville Mfg. Co., police buttons	6 33
	21.	Adams Stamp & Stencil Co., stamps	50
		Curtis, Cornish & Greene Co., supplies	11 10
		Devos & Whitnall, coal	59 60
		Doelger & Kirsten, sundries	8 38
		Ph. Gross, padlock	1 75
		I. Ladoff, services	66 66
		Page & Landeck Lumber Co., lumber	4 62
		F. Reiske, milk	3 90
		C. Rostad & Co., groceries	20 48
		Shorse & Co., supplies	5 10
		Spiegel & Co., antitoxine	8 53
		Spiegel & Co., antitoxine	11 25
		Wis. Telephone Co., telephone service, fourth quarter	50 00
		Wisconsin Rendering Co., removing garbage, December	6,333 33
		W. J. Fiebrantz, stamps	10 00
			$102,784 96

Respectfully,

ALBERT E. KUOLT,

Secretary.

REPORT OF CHIEF OF SANITARY POLICE.

Walter Kempster, M. D., Commissioner of Health:

DEAR SIR—Herewith permit me to submit for your annual report the following statement of the work of the sanitary police department for the year ending 1896.

The report and accompanying tables give a detailed statement of nuisances found, and the orders issued for their abatement.

The custom of making house-to-house and block-to-block inspections has been continued during the summer months.

The practice of having a sanitary police officer attend the funerals of those who have died of diphtheria and scarlet fever or other dangerous contagious diseases, and the enforcement of the rule of the department that all such funerals must be strictly private, has been continued during the year. Another safeguard has been added by having an officer of this department make daily visits to all houses in which diphtheria exists (which has been quarantined upon the receipt of the report of such disease), until the patient recovers or dies, this effectually cutting off all communication from such house and checking the spread of the disease.

All public and parochial schools were inspected by the sanitary police once a week during session. In addition, oil of peppermint tests were made in public schools to discover defective plumbing, and numerous orders were issued to remedy such defects.

The ordinance regulating the cutting and storing of ice for domestic and cooling purposes has been complied with under the supervision of the sanitary police.

Total amount of ice stored in ice houses located within the limits of the city, 112,448 tons.

The sanitary police have inspected the work of the crew on the steam barge Rand, engaged in transporting garbage and animal matter

from the City of Milwaukee to the plant of the Wisconsin Rendering Co. at Mequon.

The sanitary police have made 10,924 written complaints, reports and reinspections.

PRIVY VAULT REGULATIONS.

The following are the provisions of an ordinance now in force in the city pertaining to the location and construction of privy vaults:

Section 1. No privy vault shall hereafter be built within the following named districts of the City of Milwaukee, that is to say:

EAST SIDE.

All of the Third, Seventh and First wards, and that part of the Eighteenth ward situated east of Farwell avenue and south of North avenue.

WEST SIDE.

The Second and Fourth wards, and that part of the Sixth ward situated south of Sherman street, that part of the Ninth ward situated east of Thirteenth street, and that part of the Fifteenth and Sixteenth wards situated between Grand avenue and State street.

SOUTH SIDE.

That part of the Fifth ward situated west of Clinton street and south of Oregon, and that part of the Twelfth ward west of Clinton and north of Mitchell street.

Sec. 2. In all other districts of said city privy vaults shall be constructed so that they shall be water-tight, and no such vault shall be located or built within two feet of the line of any lot.

Sec. 3. Any person violating any of the provisions of this ordinance shall be punished by a fine of not less than ten or more than one hundred dollars.

This ordinance should be amended so as to forbid either the keeping or maintaining a privy vault in the central and more densely populated portion of the city. The ordinance is sometimes construed to mean that vaults may be used if kept in good condition. The ordinance should provide that no privy vaults of any kind should be maintained in certain defined limits, and that vaults now in use be cleaned and filled.

The number abolished during the year is 86, as will be seen by reference to the following table.

In all other portions of the city where privy vaults were found not water-tight, or otherwise defective, orders were issued to cause the deficiencies to be made good.

PRIVY VAULTS.

Returns were made on 5,253 permits for cleaning vaults in 1896, of which 3,099 were for voluntary work, the aggregate quantity removed being 12,257 yards. The average price paid during the year was $3.00 per yard, but the large competition, 34 licensed scavengers working 50 wagons, has caused the drop and saved the citizens over $5,000. The ordinance fixes the price at not over $4.00 per yard. Thus the sum of $36,771 was paid out for removing night soil, which, divided by 50 wagons used in the business, would bring the income of each team to $735.50, from which sum $10.00 is paid for license fee.

GENERAL ORDERS.

Three hundred and sixty-four orders of a general nature, comprising all classes of nuisances other than water closets, cleaning of vaults and construction of sewer and connect with street sewer, have been issued. Of this number 97 remain on the books and orders will be duplicated as soon as the season advances; while 267, or 75 per cent., have been complied with. Two hundred and forty-seven sewer orders were given and 136 sewers constructed.

Forty-seven orders to disconnect vaults from sewers were issued; 551 calls for consultation sent out; 4,749 complaints, including 648 coming direct from citizens, were filed; 283 of the latter proved, upon investigation, without foundation.

The whole number of orders issued foots up to 4,654; still in a good many instances one order would comprise several classes, and this accounts for the difference in the classified list of orders, which approximates 5,818 during the year.

The following tables show the number and nature of the orders issued during the year, commencing Jan. 1, 1896, and ending Dec. 31, 1896:

TABLE No. 23.

Showing, by Months, Number of Complaints Filed, Orders Issued, Etc., During 1896.

MONTHS.	Complaints Filed.	Inspector's Reports.	Nuisances Ordered Abated.	Vaults Ordered Cleaned.	Scavenger Permits Issued.	Vaults Ordered Removed.	Sewer Connections Ordered.	Cow Stables Inspected.	Citizens Complaints Filed.	Citizens Complaints Verified.	Citizens Complaints not Verified.	Sewer Inspections Made.
January	84	346	74	21	141	1	.....	.....	16	6	10	10
February	145	360	132	23	101	3	.....	.....	35	22	13	33
March	161	414	139	34	164	4	1	16	25	11	14	16
April	379	1,054	345	103	449	10	87	72	55	29	26	18
May	449	1,346	434	203	554	41	36	2	83	58	24	8
June	851	1,323	827	523	798	42	27	.....	85	48	37	15
July	819	1,551	804	495	837	67	35	.....	117	72	45	21
August	623	1,287	612	430	734	46	26	.....	83	45	38	23
September	402	995	329	177	498	22	8	.....	53	27	26	34
October	362	757	231	122	449	16	17	2	44	22	22	28
November	240	647	156	54	330	2	9	111	23	9	14	14
December	243	844	140	64	287	3	1	5	29	16	13	13
Total	4,749	10,924	4,223	2,249	5,342	257	247	208	648	365	283	233

TABLE No. 24.

ORDERS BY MONTHS.

MONTHS.	General.		Scavengers.	
	Issued.	Disobey'd.	Issued.	Disobey'd.
January	53	4	21	.....
February	109	5	23	.....
March	102	5	34	1
April	155	14	102	5
May	195	26	203	10
June	277	37	523	21
July	274	42	495	11
August	227	16	330	10
September	149	23	183	13
October	92	12	127	4
November	91	10	54	5
December	75	3	64	15
Total	1,799	197	2,154	95
	90.1 p. ct. obeyed.		95.6 p. ct. obeyed.	

TABLE No. 25.

ORDERS TO PROVIDE WATER CLOSETS.

WARDS.	OBEYED.	DISOBEYED.	No. ISSUED.
First	5	18	23
Second	7	12	19
Third	3	12	15
Fourth	11	21	32
Fifth	23	25	48
Sixth	8	10	18
Seventh	5	5	10
Eighth	8	2	10
Ninth	1	3	4
Tenth	1	1	2
Eleventh	1	.....	1
Twelfth	2	7	9
Thirteenth	.....	.....	.....
Fourteenth	.....	.....	.....
Fifteenth	6	3	9
Sixteenth	2	1	3
Seventeenth	.....	.....	.....
Eighteenth	3	3	6
Total	86	123	209
	41 p. ct.	59 p. ct	

CONFISCATION OF FRUITS AND VEGETABLES—1896.

	Pounds.	Value.
January	3,100	$26 00
February	17,700	243 00
March	.....	25 75
April	4,075	15 00
May	1,500	10 50
June	550	90 40
July	21,900	17 48
August	1,365	12 27
September	775	54
October	81	.....
November	.....	.....
December	.....	.....
	51,046	$440 94

MEAT CONFISCATION, 1896.

	Pounds.	Value.
January	1,412	$56 14
February	1,178	60 01
March	454	20 44
April	651	28 13
May	913	43 25
June	6,456	183 71
July	3,291	58 32
August	545	22 45
September	854	34 15
October	1,026	43 86
November	1,033	45 72
December	2,518	46 59
	20,331	$642 77

ORDERS PERTAINING TO PLUMBING, ETC.

a.

To make sewer	247
Clean sewer	66
Connect barn to sewer or cask	15
Connect bar sink to sewer	1
Connect ice-box to sewer	4
Connect hydrant to sewer	1
Connect roof conductors to sewer	27
Connect sink to sewer	24
Connect well to sewer	8
Renew sewer	8
Repair sewer	66
Seal sewer	21
Trap sewer	2
Total	490

b.

Clean sink waste pipe	4
Repair sink	3
Repair sink waste pipe	3
Trap sink	83
Trap and ventilate sink	2
Ventilate sink	7
Provide sink	4
Provide ventilation	5
Clean ventilation pipe	1
Repair ventilation pipe	6
Total	118

c.

Connect slop-hopper to sewer	1
Provide iron slop-sink	1
Provide slop-hopper	7
Remove slop-hopper	10
Repair slop-hopper	2
Trap slop-hopper	4
Clean slop-hopper	4
Total	29

d.

Clean water closet	30
Provide water closet	209
Provide water for water closet	21
Remove pan closet	5
Remove water closet	7
Repair water closet	48
Repair water pipe	1
Thaw water closet	3
Ventilate water closet	4
Ventilate stable	9
Trap water closet	1
Total	338

e.

Clean catch-basin	11
Remove catch-basin	1
Provide catch-basin	4
Renew plumbing	1
Repair plumbing	54
Repair catch-basin	1
Repair waste pipe	10
Repair water pipe	4
Repair trap	2
Trap basin	4
Provide waste pipe	2
Disconnect waste pipe	2
Total	86

II.—ORDERS PERTAINING TO VAULTS AND URINALS.

a.

Clean vault	2,249
Disconnect vault from sewer	8
Disinfect vault	47
Fill vault	64
Provide vault, water-tight	116
Remove vault	14
Repair vault	3
Remove vault from line of lot	1
Total	2,502

b.

Clean urinal	1
Connect urinal	5
Provide urinal	4
Remove urinal	4
Repair urinal	4
Ventilate urinal	1
Total	19

III.—ORDERS PERTAINING TO MANURE AND GARBAGE NUISANCES.

a.

Disinfect manure box	2
Provide manure box	124
Provide cover for manure box	3
Repair manure box	2
Remove manure	85
Remove manure box	2
Total	218

b.

Provide box for garbage	753
Remove garbage box	6
Remove mixed garbage	35
Provide cover for garbage box	6
Total	200

IV.—MISCELLANEOUS ORDERS.

Boil water before using	14
Clean alley	4
Clean basement, cellar and premises	15
Clean well	13
Clean and fill cistern	12
Clean pen for poultry	9
Clean shed	4
Clean cows	6
Close well	33
Clean yard	33
Cover cistern	3
Drain basement and cellar	9
Enclose closet	1
Extend ventilating shaft	1
Fill or drain lot and sink hole	15
Provide box for ashes	9
Provide eave gutters for barn and house	11
Provide new floors for stables	17
Provide water	3
Provide cisterns	9
Referred to Board of Public Works	46
Remove dogs	1
Remove chickens and ducks	29
Remove chicken coop	2
Remove cows and horse from basement and shed	1
Remove filth from basement	5
Remove hogs	1
Remove night soil from yard	5
Remove rubbish and ashes	65
Remove wooden sewer	11
Remove rags	1
Repair smokestack	1
Repair eave gutters and roof conductors	12
Repair roof	2
Clean bakery	8
Clean bedding	1

Clean cistern	14
Clean chute	1
Clean rooms	5
Clean stable	2
Clean dry well	1
Provide dry well	1
Remove dry well	1
Remove decayed trees	1
Remove pigeons	2
Remove goats	2
Extend chimney	3
Extend exhaust pipe	1
Cover well	1
Provide chicken coop	1
Total	348

V.—ORDERS TO CEASE COMMITTING NUISANCES.

a.

Cease draining slops to alley	2
Cease draining slops to lot	2
Cease running liquid manure to alley	4
Cease running liquid manure to street gutter	1
Cease running slops to street gutter	6
Cease throwing garbage in alley	3
Cease throwing slops and waste water in alley	3
Total	21

b.

Cease burning rags	1
Cease burning manure	3
Cease cleaning rags	1
Cease throwing night soil in yard	3
Cease throwing slops in yard	8
Cease throwing leather scraps	2
Total	18

VI.

Letters of caution to consumers of well water	27
Notice to call at health office for consultation	551
Total	578

The following is a report of the work done pertaining to milk stable inspection during the year:

Number of stables inspected	120
Number of stables in bad condition	37
Number of cows inspected	791
Number of cows kept in good condition	746
Number of cows kept in bad condition	45
Number of cows fed on hay, mill feed, brewery grains	612
Number of cows fed on distillery slops	179

All stables referred to are located within the limits of the city.

DISTRICTS OF THE SANITARY POLICE.

The city is divided into the following inspection districts:

First, Eighteenth and north half of the Seventh wards	James Cunningham.
Tenth and Twentieth wards	H, Keihl.
Twelfth and Seventeenth wards	J. O. Osmunson.
Thirteenth and Twenty-first wards	C. J. Weiser.
Second and Sixth wards	B. Van Echtern.
Eleventh and Fourteenth wards	P. Feichtinger.
Fifteenth and Sixteenth wards	Aug. Puttler.
Fifth and Eighth wards	T. J. Hannan.
Ninth and Nineteenth wards	Theo. Weil.
Third, Fourth and south half of Seventh wards	A. J. Firle.
Milk Collector	G. Schweizer.

MEAT INSPECTORS.

Chas. Nimmer. John Rodermund.

Respectfully submitted,

CHAS. J. FRICKER,
Chief of Sanitary Police.

REPORT

OF THE

Commissioner of Health

OF

MILWAUKEE.

(TWENTY-FIRST ANNUAL REPORT OF THE DEPARTMENT.)

APRIL, 1898.

MILWAUKEE:
ED. KEOGH, PRINTER, 386 AND 388 BROADWAY.
1898.

REPORT

OF THE

Commissioner of Health

OF

MILWAUKEE.

(TWENTY-FIRST ANNUAL REPORT OF THE DEPARTMENT.)

APRIL, 1898.

OFFICERS AND EMPLOYES

OF THE

Health Department of the City of Milwaukee

For the Year Ending April 18, 1898.

Commissioner of Health.

WALTER KEMPSTER, M. D.

Medical Assistants to Commissioner of Health.

H. E. BRADLEY, M. D., T. H. HAY, M. D., W. H. WASHBURN, M. D.
L. SCHILLER, M. D., A. B. GRIDER, M. D.

Food Analyst.

W. C. BENNETT, M. D.

Consulting Staff to City Isolation Hospital.

SOLON MARKS, M. D., U. O. B. WINGATE, M. D., JACOB LANG, M. D.

Register of Vital Statistics.

JOHN W. COON, M. D.

Secretary.

ALBERT E. KUOLT.

Clerk.

E. W. DIERCKS.

Stenographer.

MISS N. H. TAYLOR.

OFFICERS AND EMPLOYES—CONTINUED.

Sanitary Police.

CHAS. J. FRICKER, Chief Sanitary Inspector.

DAVID THOMAS, Chief of Disinfecting Corps.

CHAS. NIMMER, Meat Inspector.

JOHN RODERMUND, Meat Inspector.

BYRON OLSON,

THEO. WEIL,

J. A. OSMUNSON,

PETER FEIGHTINGER,

W. E. FERGUSON,

ISADOR LADOFF,

AUGUST PUTTLER,

HARRY KIEHL,

T. H. HANNAN,

CHAS. CUNNINGHAM,

T. H. CURTIS,

JOHN DOLGE,

A. J. FIRLE.

Matron to City Isolation Hospital for Contagious Diseases.

MISS J. C. WEHRMAN.

Cook to City Isolation Hospital.

SARAH HAEUSLER.

Janitor to City Isolation Hospital.

MIKE HAEUSLER.

COMMITTEE ON HEALTH

OF THE

BOARD OF ALDERMEN.

A. J. DOELGER, *Chairman.*

W. H. STARKWEATHER,

H. J. SCHMIDT,

O. T. RENNING,

FRED. STEINMUELLER,

A. DIETRICH,

F. NIEZORAWSKI.

REPORT.

To the Honorable the Mayor and Common Council of the City of Milwaukee:

GENTLEMEN—Herewith I have the honor to transmit the Annual Report of the Health Department for the year ending April, 17, 1898, being the twenty-first annual report of the department.

The total number of births reported for registration during the year ending Dec. 31, 1897, was 7,642, of which number 3,927 were boys and 3,715 girls, the total number of births being 213 less than during the year 1896. Of the sexes there were 148 boys and 65 girls less in number than for the last preceding year.

The annual birth rate per one thousand of the population, estimating that to be 275,000, is 27.79 per cent.

The total deaths from all causes were 3,606, of which number 1,907 were men and 1,699 women, being 298 less than for the year 1896, and of this number 154 were men and 144 women.

The annual death rate per one thousand upon an estimated population of 275,000 is 13.11.

Of the whole number of deaths during the year 1897, there were 1,077 children under one year of age, being 220 less in number than deaths during the same age for the preceding year; 1,502 of the deaths during the year were of children under five years of age; during the year 1896 there were 1,791 children died under the age of five years, so that there were 289 less deaths among children under five years of age in 1897 than during the year 1896, once more lowering the percentage

of deaths among children. The steady decrease of the death rate among children may be more clearly shown by the following comparative table:

1892, 2,223 deaths, or 49.2 per cent. of the whole number, being 9.97 in one thousand.

1893, 2,317 deaths, or 51.9 per cent. of the whole number, being 9.94 per one thousand.

1894, 2,091 deaths, or 49.2 per cent. of the whole number, being 8.67 in one thousand.

1895, 1,825 deaths, or 46.9 per cent. of the whole number, being 7.30 in one thousand.

1896, 1,791 deaths, or 45.8 per cent. of the whole number, being 6.89 in one thousand.

1897, 1,502 deaths, or 41.65 per cent. of the whole number, being 5.46 in one thousand.

The decrease in the number of deaths among children under five years of age had been steady and rapid notwithstanding the fact that during this same period, that is to say between 1892 and 1897, the population of the city has increased over 52,000. During the past year the decrease in the number of deaths among children under five years of age is 289, while compared with 1892 the deaths among children under five years of age was 721 less than in that year, the population being over 52,000 more than in 1892.

Estimated upon the total number of deaths the percentage in 1893 was 51.9, while in 1897 it was 41.85, with a population of 52,000 greater.

The deaths among children under five years of age are caused very largely by diseases of the digestive system, and these disorders are in a great proportion of cases caused by improper food, or food that is not adapted to the wants of young children. By far the greatest number die during the first year of infant life, the number being 1,077 in 1897; diarrhoea is the disease which caused the largest number of deaths during this year. The same remark is true of deaths of children under one year of age in each year, statistics showing that the death rate from this cause is always

high, but since the effort which is now being made in many of the principal cities of this country to improve the food supplied to children of this tender age the death rate has decreased and is decreasing wherever good food is supplied.

Ignorance and filth, added to the carelessness or cupidity, or both, of those who handle the milk from the time of the milking until it reaches the young child, are responsible for many of the deaths occurring during this first year of life, and it has been made manifest over and over again that where these factors are eliminated, where the milk is furnished pure and the child obtains it free from adulteration or from the germs of disease which obtain access to the milk at some point in its transportation, the death rate decreases with great rapidity.

The experimental work which was established in New York by Mr. Nathan Straus some years ago, and carried on under his direction in parts of New York City where the greatest death rate occurred among young children, has been continued under his direction with the gratifying result that there has been a steady decrease in the number of deaths among children fed upon milk from the date when the experiment was commenced until the present time. There could be, perhaps, no severer test of the utility of supplying pure milk than the one above referred to. In the regions selected by Mr. Straus for the experimental work, the fatality among children had been enormous, they were crowded into tenements, where, in many instances, from six to eight, and often more, children and grown people lived in one room. Ignorance and filth shadowed by poverty prevailed everywhere, and yet amid these conditions so favorable to the harvest of death, the milk being improved and properly prepared and given to these little ones clean and sweet, soon reduced the death rate among them nearly 50 per cent., and the good work thus begun has been extended year after year through the benefactions of this man, supplemented now by the efforts of the city as well as of

wealthy persons who have become interested in the work of life-saving.

The same general condition has been noticed in other great cities, both in this country and abroad, and the same results have followed wherever a watch has been kept over the milk supply; it is the same in this city, the steady fall in the percentage of deaths among children follows the improvement in the milk supply.

The deaths attributable to diseases of the digestive system, plus diarrhoeal diseases, were, in 1896, 470; in 1897, 424, a falling off of 56 during the last year. The two causes of death grouped under the terms "Convulsions" and "Infantile Debility" were in 1896, 1,090, and in 1897 but 832, the last year showing a decrease in number of 258 as compared with 1896.

Not every death from infantile debility or convulsions can be traced to improper food, but it is well understood that it is a prolific cause of death in each.

Infantile debility is the disease which causes so many babies to fail, droop and die, and generally this debility comes because they are not properly nourished by the food ingested; it is a matter of common knowledge that when the proper food is given to a drooping baby the child begins to thrive and recover from the debility—and it is also a fact that when the proper food can not be obtained the drooping or debility increases until death occurs.

In considering the causes of death in young children, especially those less than one year of age, the several forms mentioned, that is, diarrhoeal diseases, diseases of the digestive organs, convulsions and infantile debility, must be grouped; and by far the greater number of deaths from these causes are due to improper food.

The matter is of such great importance that the subject should be continually agitated until everything that will cleanse and improve the quality of the milk has been accomplished; for by this method many lives may be saved annually and the one agent most potent to bring about the improved

conditions and to decrease the annual mortality among young children is the milk.

If the life saving station should save two hundred or more lives each year, it would receive universal commendation for its work.

These young lives are as surely saved as though they were rescued from drowning; and with better appliances and an increased number of inspectors more lives may be saved annually.

The work of the department for the year 1897 has been carried on as thoroughly as the help at our disposal would permit. Four thousand six hundred and seventy-three samples of milk were examined during the year, and of these 254 samples were found to contain less than the required 3 per cent. of butter fat.

Of the whole number of samples examined 144 were brought direct from the depot by the inspectors, and these samples averaged 4.05 per cent. of butter fat, while the average of all other samples, taken by inspectors from milk wagons, averaged 3.74 per cent. of butter fat. The poorest milk of all came from shops. It was from these shops that the greatest number of samples came, found below standard, and the milk was also the dirtiest.

The majority of the shops take but little care of milk; it is often placed in so-called refrigerators with other things, odorous or malodorous, and no special attention is given to it to prevent contamination. In some places large lumps of ice were found in the milk, to keep it cool—some of this ice is cut from ponds, and some from the Kinnickinnic—reeking with sewage filth, yet used thoughtlessly by shop keepers to "cool the milk," the melting ice of course contaminating, diluting and poisoning the milk.

It is significant that milk taken from the cans at the depot, in which it is transported from the dairy farms, should average 4.05 per cent. of butter fat. That taken from milk wagons averages 3.81 per cent. butter fat, while the milk sold from

shops, which is furnished, generally from the milk wagons, averages in a large proportion of cases less than 3 per cent. of butter fat.

During the year 131 arrests were made for violation of the milk ordinance, and $1,281.47 were imposed as fines. All of these fines were imposed upon persons who sold milk either below the standard required by law or for adulteration or for both.

Several persons were arrested for violating an ordinance which provides that milch cows must not be fed upon distillery slops or swill, but the jury passed upon the ordinance itself, and found "the ordinance unreasonable," and the persons not guilty.

There are at present in this city 126 dairy stables, having within them 736 cows, and there are 483 cows fed distillery slops and swill, in plain violation of the ordinance, yet it seems impossible to secure conviction. The ordinance is explicit. It reads as follows:

"No person shall sell or offer for sale, or carry for the purpose of sale, or have in his possession with intent to sell, or offer for sale any impure, adulterated or unwholesome milk, and no person shall adulterate milk or keep cows for the production of milk in a crowded or unhealthful condition, or feed the same on food that produces impure, diseased or unwholesome milk, or shall feed cows on distillery waste, usually called 'swill' or vinegar slops, or upon any substance in a state of putrefaction or rottenness. Nothing in this ordinance contained shall be construed to prohibit the feeding of cows on wholesome brewer's grain.

"The addition of water or any other substance is hereby declared an adulteration, and milk thus obtained from animals that are fed on distillery waste, usually called 'swill,' or upon any substance of an unwholesome nature, or upon any substance in a state of putrefaction or rottenness, or upon any substance of an unwholesome nature, or milk that has been exposed to or contaminated by the discharges or exhalations from persons sick with any contagious diseases, or milk from tubercular cows is hereby declared to be impure and unwholesome."

It was found that 638 of these cows have "some exercise during the summer months," but apparently the exercise referred to is performed in a small yard; they are not pasture fed,

nor do they have room to walk far. Ninety-eight of the number have no exercise winter or summer, being stabled the year round.

The reports of the inspectors state that 421 of these cows are kept in good condition, that 315 are filthy. As heretofore stated these city dairy stables should be closed. Cows kept where they can not exercise, and where they can not be pastured, will not long remain in a healthy condition or produce healthy milk. Such stables have been abolished long ago in many cities. They should be abolished here. Even were they kept in the cleanest and best ventilated condition, and the animals fed on the choicest food, the continued confinement would be unhealthy.

It is unnatural to the animals to be thus confined, and the confinement will sooner or later result unfavorably.

The question is often asked, "What is it that gets into the milk which makes it unwholesome?" This question is answered, in part at least, in a document recently issued from the United States Department of Agriculture, from which the following excerpts are made:

"Contamination of milk by the germs of disease is the most dangerous form. Some infectious diseases attack animals and man alike, and if a cow is suffering with one of these she is a menace not only to the whole herd, but to the persons who consume her product, for her milk may readily act as a carrier of germs to the consumer. It has been found that in certain diseases, especially when the udder is affected, the germs may be in the milk at the time it is drawn; then no amount of protection after milking will assure freedom from disease-producing bacteria.

"Tuberculosis, or consumption, is the disease that is most common and most to be feared. Much has been written on this subject, and it is unnecessary to here discuss the particular conditions that cause the malady or aid its progress. In the advanced stages of tuberculosis the milk becomes unnatural in appearance, but sometimes, even before the udder is known to be affected, it may contain the specific germs, called bacilli tuberculosis.

"Diphtheria may similarly be transmitted from the cow to the milk consumer, and this seems to be true of scarlet fever, or a closely allied disease. Foot and mouth diseases and anthrax are some of the others that may infect the milk. It is fortunate that when the animal is affected with

some of these dangerous diseases the milk flow stops. It is also fortunate that most of these diseases, except diphtheria, do not occur, or are very rare, in this country.

"Milk may be the means of conveying to the consumer germs of diseases from other persons. For example, if any of the attendants have a contagious disease, or are at any time exposed to such, the air about them and their surroundings is more or less infected, and the germs may easily get into the milk.

"The most important diseases whose germs enter the milk from external sources are typhoid fever, diphtheria, scarlet fever, cholera, and tuberculosis. Numerous outbreaks of typhoid fever have been reported where there was no doubt about the milk supply being the carrier of the germs, they have gained entrance to it from external sources, such as infected water, or a person who had nursed or been otherwise exposed to a typhoid fever patient. Outbreaks of diphtheria have been traced to milk from farms where diphtheria was known to exist in the families of the attendants. The same is reported of scarlet fever and cholera.

"Other factors than bacteria may influence the appearance and composition of milk at the time it is drawn and render it impure or unnatural. The cow's health is an important factor; but abnormal milk is also due to excitement of the cow, temporary disorder, bad treatment, injury, time for calving, and substances eaten. All of these causes may seriously affect the quantity as well as the quality of the milk. Some of them are responsible for sudden slight variations in the quality of milk, as shown by the regular tests, and which frequently seem so mysterious and without cause.

"Excitement of the cow affects the milk; even changing its stall may slightly alter its composition. The cow is an animal of regular habits. She expects to be milked at a certain time and to be fed at a certain time, and becomes more or less uneasy if the usual program is not carried out. A change of milkers may result, for a few milkings, in a reduced yield or in milk of poorer quality.

"Many slight variations in the quality and quantity of milk may be charged to neglect. The farmer who leaves his cows out in a bleak storm should not be surprised to find that his test at the factory has fallen, while that of his neighbor, whose cows were sheltered, did not fall. One of the first functions of food is to maintain the bodily heat, and when necessary it will be used in this way instead of forming milk. Thus, the state of the weather, temperature, and storms affect the milk to a greater or less degree. Dairymen are all aware that bad treatment or neglect quickly results in decreased profits. The brutal treatment of a cow by an attendant, by kicking, beating or otherwise, is not without effect on her milk. Bloody milk is often caused by an injury to the udder, which may have been inflicted by a thoughtless attendant. Sometimes the 'boss of the herd' is to blame for such injuries to weaker animals.

"The largest part of the impurities found in milk get into it in the short time after it is drawn from the cow and before it leaves the stable. This brief period may be called the critical time in the history of dairy products. In many stables myriads of bacteria are entering the milk every minute it remains exposed, being carried there by many kinds of foreign matter, some of which would do no harm were it not for the germs it brings. Grotenfelt mentions the following impurities which he found in unstrained fresh milk: Manure particles, fodder particles, molds, fungi, cow hairs, particles of skin, human hairs, parts of insects, down from birds, small bits of wood, woolen threads, linen threads, fine threads, soil particles. It is evident that these different kinds of foreign matter are derived from numerous sources, but the bulk of the impurities consists of ordinary stable dirt, chiefly manure, and its presence in quantities, in milk, is evidence of slovenly methods. Over 50 grains of this matter have been found in 100 pounds of milk, and when it is remembered that it contains myriads of bacteria of the forms causing putrefaction and decomposition, it does not seem strange that milk is soon affected by its presence. Germs introduced in this way, in large numbers, may act as poisons to the delicate consumer and cause severe intestinal troubles.

"Dirt gets into the milk, when in the stable, principally from three sources, viz: the cows, the milkers, and the air. But this classification is unnecessary for stables which are carelessly cleaned only once or twice a week, and in which it is impossible for an animal or person to remain any length of time and come out undefiled; in such places there is a constant shower of bacteria.

"The cows supply most of the dirt to milk, as any one will admit if he is at all familiar with the conditions in many stables. It is not uncommon to see cows covered with so much dust that the color of their backs can not be seen; their flanks, hips and sides are sometimes plastered with layers of manure.

"When the work of cleaning the cows is neglected, it is impossible to keep milk even decently clean when milking. Large lumps of dirt, hairs, and straws are continually falling into the pail. The hairy coat is an excellent harbor for dirt and bacteria, and every time anything touches the skin, or the udder or surrounding parts are disturbed, a shower is precipitated. As more or less violent motion always occurs at milking, the loosely adhering particles are easily dislodged just at a time when the milk pail is in a position to collect them.

"Untidy attendants constitute another source from which milk is contaminated. They frequently turn from cleaning the horses, or other equally dirty work, to milking the cows, with no thought of their unfitness to handle milk. On some farms milking is regarded as the dirtiest of all work, and the milkers prepare for it accordingly. Dust adheres to the milker's clothes almost as readily as to the cow's coat, and it easily falls from his shoulders and sleeves into the pail; his hands and finger nails also contribute a share

to the contamination. Thus he may be the means of conveying to the milk as many kinds of germs as fall from the cow, and in addition to this he may transmit human diseases, as referred to above.

"Air is a source of germs found in milk. It is not a medium capable of supporting bacteria by itself, but it carries more or less of small particles of dust and organic matter in suspension, and these have many bacteria in and upon them. On account of the dust being constantly raised the number of organisms in the air of a stable may be considerable, especially if dry feed stuffs are used and the manure is allowed to become dry on the floor. Over 100 different kinds of organisms have been found in a single quart of stable air. These do not increase in numbers while floating about, but they quickly commence a vigorous growth when they fall into fresh, warm milk. As dust is constantly tending to settle, the largest number of bacteria is to be found near the door, and a vast number may fall into a milk pail or can in a very short time.

"In some cases stable air contains so much dust, and milk is exposed to it so long, that it is the chief means of contamination. Most of the dirt in the air is from dry, dusty fodder and bedding. When hay is thrown through the chutes, the air is quickly filled with dust, and air currents and the constant shaking of the hay by the animals keep the dust from settling. Some rises every time the bedding is disturbed, and it is naturally most abundant beneath the cow during the milking.

"What has already been said about improperly kept stables applies equally, in the main, to an unclean dairy building or room. Milk will not remain pure if stored in an unclean place. One of the chief faults in the care of a dairy room is in allowing it to remain continuously damp. The sloppy methods so often practiced are favorable to bacteria.

"The two most important sources of contamination after the milk has left the stable are unclean dairy utensils and impure water; although these often affect the milk while in the stable, the trouble is usually due to their improper care or infection elsewhere.

"Utensils are sometimes made of poor material or are so complicated or irregular that milk is not completely removed from them and furnishes legions of bacteria to the next lot of milk with which they come in contact. Wood has so many pores that it is almost impossible to clean it. The supposed economy of using old, dilapidated vessels of any kind, those having double bottoms, patches, dents, or bare places from which tin has been worn, frequently result in impure milk. Neglected strainer and wiping cloths, and promiscuous rags used for drying, are important sources of contamination.

"Cleaning utensils is an operation sadly neglected on many dirty farms; certain articles, as coolers, whose use is intended to improve the milk, are sometimes so poorly cleaned that they contaminate the milk more than they purify it. Milk pails washed only in cold or luke-warm water soon become covered with a greasy, sticky layer of foreign matter. Dirt is often allowed to accumulate about the necks of cans and in little grooves or ridges under

the shoulders, and careful dairymen are surprised to find these when they investigate the places hidden from view. Such conditions are most liable to be found when the same cans used for delivering milk are used for returning to the farm, waste products in which numerous kinds of fermentations are progressing. The milk receiver sometimes sticks labels on such cans to call special attention to their condition. This is a good plan.

"Water from cisterns, shallow wells, or streams, or that which has been long exposed to the air, can not be relied upon as pure. It is liable to contain many forms of vegetable life. Sometimes surface drainage, or the seepage from privy vaults or barnyards, finds a way through the ground to a well, yet the use of the water is continued without knowledge of its dangerous qualities. In this manner water used in a dairy has spread typhoid fever.

"If impure water is supplied to a dairy it may affect the quality of the milk indirectly by injuring the health of the cows. But its first effect is to contaminate the milk directly by the water which remains on the utensils when they are not properly dried and sterilized, or by water which is purposely added for adulteration. Frequently milk is stored in tanks of water. This water is rapidly fouled by the dirt on the bottoms and sides of the cans, or by impure ice, milk slopping over, and by rinsing various articles in it, and it thus becomes another means of contamination.

"Experiments have shown that the contamination of milk occurring under ordinary circumstances can be reduced over 95 per cent. by taking care to avoid all possible sources of impurity and conditions favoring germ growth. The fact that bacteria are usually attached to larger bodies makes the work of preventing their entrance into milk comparatively easy. But with all the care that it is practicable to observe, some bacteria will get into the milk; therefore it must be cooled as soon as possible and held at a low temperature to prevent their multiplication. The different steps through which milk passes might be compared to the links of a chain—if one is weak the strength of the whole chain is impaired; so if the care of milk is neglected at any step the care taken at other times may be rendered useless."

These extracts are copied to show the importance of cleanliness in dairies, and of those engaged in handling milk. Without intelligent, constant inspection the results required can not be obtained.

The limit of life-saving has not been reached in this community, and will not be, until every herd of dairy cows is free from tuberculosis or consumption, until vinegar slops and swill are no longer used for cows' food, and until cleanliness and purity is maintained at every step of the way, and adulteration of all kinds has been stopped. When these things are accomplished there will be a much greater reduction of infant

mortality. That it is possible to do this has been, and is being demonstrated. To do it properly the Health Department needs, and must have more inspectors; with this help more lives can be saved; it remains for your honorable body to determine whether you will provide means to save these lives.

To secure a better condition in some of the dairies, the State Legislature enacted a law at its last session, entitled An Act to Secure Cleanliness in Milk Dairies. This law is general in its scope, but will prevent some of the faults mentioned if properly enforced. It is as follows:

The People of the State of Wisconsin, Represented in Senate and Assembly, do Enact as follows:

Section 1. The dairy and food commissioner, or his agents, shall have full access and ingress to all premises, buildings or dairies where milk is stored, produced or handled for the city milk trade, and it is hereby empowered to enforce such measures as may be necessary to prevent the sale of milk from diseased cows, or from cows fed upon unwholesome food, and to require cleanliness in all barns, stables, milk houses or buildings where milk is produced or stored for the city milk trade.

Section 2. Any person or persons owning or managing a dairy, the product of which is sold as milk for family use, shall feed his cows upon wholesome food; keep them, when housed, in clean and comfortable stables, and handle the milk with clean utensils.

Section 3. Any person or persons violating any of the provisions of this act, shall be deemed guilty of a misdemeanor, and upon conviction thereof, be fined not less than twenty-five nor more than one hundred dollars for the first offense, and not less than one hundred nor more than two hundred for each subsequent offense.

Section 4. This act shall take effect and be in force from and after its passage and publication.

This law, while excellent in many ways, does not provide for the prevention of some local conditions known to be unsanitary, which if prevented would materially improve the milk. To secure the improved sanitary conditions the following ordinance was prepared, and has been introduced:

PROPOSED ORDINANCE.

To regulate and provide for the sale of milk and cream within the City of Milwaukee, and to license venders thereof.

The Mayor and Common Council of the City of Milwaukee do ordain as follows:

Section 1. No person or persons shall sell, barter or traffic in milk or cream within the City of Milwaukee without having first been licensed to do the same.

Section 2. Before any license is issued to any person or persons, firm or corporation, the person or persons applying therefor shall present to the Commissioner of Health a certificate, signed by a duly appointed veterinary surgeon, that each animal from which milk or cream is furnished by said person or corporation, or is sold by such applicant for license, has been tested by the said veterinary surgeon for the disease of tuberculosis, and is free from said disease.

Section 3. Every milk or cream vender selling, offering for sale, exposing for sale, exchanging or delivering, or disposing of the same in or from any store, stand, booth, market place, milk depot, warehouse, dairy, cow stable, or any building or establishment of any kind, or in or from any wagon, carriage or other vehicle, shall pay the sum of ..... dollars as a license fee, which sum shall be paid into the Milwaukee city treasury, and said license shall continue and be operative until the first day of May next ensuing, unless sooner revoked as hereinafter provided, but the license fee of any person owning only one cow shall be fixed at one dollar annually, provided all other requirements of this ordinance be complied with by such persons.

If any person or persons, firm or corporation, commence or engage in the traffic or handling of milk or cream at periods other than those hereinbefore mentioned, he or they shall, before doing so, furnish a certificate from the veterinary surgeon as aforesaid, and shall pay a proportionate part of the license fee, and procure the license in their case required, which license. so issued, as well as other licenses and certificates herein required, shall be good for the period ending with the first day of May following the issuance and delivery thereof.

Every person, firm or corporation violating this section or any of its provisions, shall be deemed guilty of a misdemeanor, and, on conviction thereof, be punished by a fine of not less than twenty-five dollars, nor more than one hundred dollars, or by confinement in the house of correction not exceeding ninety days, or by both said fine and confinement, for each and every offense.

Section 4. On and after the first day of May annually licenses shall be issued to all the applicants therefor who have complied with the provisions of this ordinance. Before the issuance of the license every vender of milk or cream shall make written application therefor on a printed form provided for that purpose, on which shall be stated:

First—The name, residence and location of the business place or places of the applicant.

Second—The number of cows, owned or controlled by the applicant, or from which milk is obtained for sale, and the date when said cows were

examined by a veterinary surgeon, together with his certificate of examination.

Third—The number and description of each and every wagon, carriage or vehicle, used by said applicant in the milk or cream business.

Fourth—If, after the issuance and delivery of the license, any change be made in the location of the place of business, or of the number of cows named in such license, notice thereof must forthwith be given in writing to the Commissioner of Health.

The said Commissioner of Health shall not issue any permit for a license unless he is satisfied with the cleanly and sanitary condition of the stables where the cows controlled by said applicant are stabled or kept, and the said Commissioner of Health, at any time after the issuance of any license, may investigate, or cause to be investigated, the condition of said stables, and if, at any time, said Commissioner of Health shall be satisfied that the stable or barn is in an unsanitary condition, and the business carried on therein is detrimental to the public health, or that the proprietors or keepers thereof are not complying with the provisions of this ordinance, he shall forthwith take the necessary steps to revoke the license to the owner or keeper of any such stable or stables, and no new license shall be issued until said stable or stables shall have been placed in a sanitary condition, and all other provisions of this ordinance are complied with.

The Commissioner of Health or any Inspector of the Health Department designated by said Commissioner, shall have the right, and it shall be his duty to enter and have full access, ingress and egress to all places where milk or cream is stored or kept for sale; to all wagons, carriages or other vehicles, railroad cars or other conveyances of any kind used for the carrying, transportation or delivery of milk to any warehouse, place of business, factories, buildings, farms, stables, railroad depot, erections, establishments or places of any kind, and to all vessels, bottles, cans, packages, refrigerators or receptacles of milk or cream, and to take samples of milk and cream therefrom not exceeding one quart, for the purpose of inspecting, testing or analyzing the same. Whenever a sample or samples so found and taken shall not correspond with, or shall be in violation of the requirements of this ordinance, the person or persons, firm or corporation in whose possession, care, custody or control such milk or cream may be found, shall be deemed guilty of a misdemeanor, and fined not less than ten dollars nor more than one hundred dollars, or by confinement in the house of correction in and for Milwaukee County not exceeding ninety days, or by both said fine and confinement, for each and every offense.

Section 5. No milk or cream shall be sold, offered for sale, exposed for sale, exchanged, delivered, transported, conveyed or carried on any wagon, carriage, sleigh or other vehicle, which is not provided with a close cover, as hereinafter provided, and there shall be painted thereon, on both sides thereof, in a conspicuous place, and in legible Roman letters, not less than five inches in height, the name of the milk vender, and the number and street

of the place of business, and the number of the wagon, and if such vender or dealer sells skimmed milk, the words "Skimmed Milk" shall be painted on said wagon, in such manner as aforesaid.

No person or persons shall bring to, or deliver milk in the City of Milwaukee in any open or uncovered wagon, cart or conveyance of any kind; and all milk brought to the City of Milwaukee shall be brought to said city and delivered in cars, wagons or carts so constructed that the covering provided for shall not come in contact with the cans, bottles or vessels containing the milk, and shall protect such milk and the cans, bottles or vessels containing the same from the sun and rain, and as far as practicable from the dust and other impurities of the air.

Any violation of the provisions of this section shall be deemed a misdemeanor, and on conviction thereof the offender shall be punished by a fine of not less than twenty-five, nor more than one hundred dollars, or by confinement in the house of correction in and for Milwaukee County not exceeding ninety days, or by both said fine and confinement, for each and every offense.

Section 6. Any vender of milk or cream, or any driver, servant or agent of such vender, who shall in the City of Milwaukee sell or offer for sale any milk from which the cream or any part thereof shall have been taken, shall offer for sale and sell the same as skimmed milk, and not otherwise; and no vender of milk and no driver, servant or agent of such vender shall offer for sale, or sell, or have in his custody, possession or control with intent to sell or deliver the same, any such milk from which the cream or any part thereof shall have been taken, unless the can, vessel or package containing such milk shall have conspicuously attached thereto a steel or metal plate tab on which shall be engraved the words "Skimmed Milk," in large, plain, distinct letters; said steel or metal plate tab shall not be less than three (3) inches by five (5) inches in size, and the words "Skimmed Milk" shall be painted on the wagon as aforesaid.

No person shall sell, exchange or deliver, or have in his custody or possession with intent to sell, exchange or deliver, skimmed milk containing less than 9 3-10 per cent. of milk solids, exclusive of fat.

Any person violating this section shall be deemed guilty of a misdemeanor, and upon conviction shall be punished by a fine of not less than twenty-five ($25) dollars, nor more than one hundred ($100) dollars, or by imprisonment in the house of correction in and for Milwaukee County not exceeding ninety days, or by both said fine and imprisonment.

Section 7. No person having an infectious or contagious disease, such as cholera, smallpox, membranous croup, measles, rotheln, whooping cough, typhoid fever, typhus fever, scarlet fever, or consumption (phthisis pulmonalis), or having recently been in contact with such person, shall milk cows or handle cans, bottles, dippers, measures or other vessels used for milk or cream intended for sale, unless all danger of communicating such disease to other persons shall have passed. And no milk or cream shall be

sold or dispensed for use as food from any house, shop or other place in which there is a case or cases of infectious disease as aforesaid, until all danger of contagion therefrom has been removed, and permission in writing is obtained from the Commissioner of Health authorizing the sale of milk or cream in said house, shop or other place.

Whenever a case of infectious disease, as aforesaid, is found in any building or place from which milk or cream is sold or dispensed for food, or from which any wagon or conveyance of any kind is used to distribute milk or cream for food, the Commissioner of Health, or any inspector authorized by him to do so, shall forthwith seize and destroy all of said milk or cream found upon said premises; and it shall be unlawful for any person or persons, firm or corporation to sell or dispense any milk or cream from said premises in any manner whatsoever until all danger of contagion from said disease, or either of them, has been removed, and permission in writing is obtained from the Commissioner of Health authorizing the sale of milk or cream from said place or premises.

Any person violating this section shall be deemed guilty of a misdemeanor, and upon conviction shall be punished by a fine of not less than twenty-five ($25) dollars, nor more than one hundred ($100) dollars, or by imprisonment in the house of correction in and for Milwaukee County not exceeding ninety days, or by both said fine and imprisonment.

Section 8. Whoever, by himself or by his servant or agent, employee or milk-wagon driver of any person, firm or corporation, sells, offers for sale, exchanges, delivers or transports or carries for the purpose of sale, exchange or delivery, or has in his custody, possession, care or control with intent to sell, offer for sale, exchange or deliver, or exposes or offers for sale, exchange, transportation or delivery, any milk or cream which is unclean, diluted, impure, unhealthy, diseased, unwholesome, adulterated, or not of the standard or quality provided for by this ordinance, or milk or cream to which water or any foreign substance has been added, or milk or cream produced from sick or diseased cows, or milk or cream produced from cows kept in an unclean, filthy or unhealthy condition, or milk or cream from cows fed on the refuse or slops from distilleries, vinegar factories, or any similar slops, mash or refuse, or on any other than good and wholesome food, or milk or cream that has been exposed to, or contaminated or affected by the emanations, discharges or exhalations from any human being or animal sick with any contagious or infectious disease by which the health or life of any person may be endangered, compromised or in any way affected by such disease, shall be deemed guilty of a misdemeanor, and on conviction thereof shall, for the first offense, be punished by a fine of not less than twenty-five nor more than one hundred dollars; and for each subsequent offense by a fine of not less than fifty nor more than two hundred dollars, or by confinement in the house of correction in and for Milwaukee County not exceeding ninety days, or by both said fine and confinement.

Section 9. Whenever the inspectors of milk shall have reason to believe that the provisions of this ordinance are being violated, they shall have power to open any can, vessel or package containing milk, whether sealed (locked), or otherwise, or whether in transit or otherwise. And if, upon inspection, such can, vessel or package shall be found by said inspector to contain any milk which has been adulterated, or from which the cream or any part thereof has been removed, or which is sold, offered or exposed for sale, or held in possession with intent to sell or offer for sale, in violation of any section of this ordinance, said inspector or his assistants are empowered and directed to take a sample of the same for analysis, to be delivered to the food analyst of the said City of Milwaukee, and if the said milk or cream is found by the said inspector to be filthy, or the cans or other containers are in an unclean or filthy condition, said inspector may then and there condemn the milk or cream so deemed by him to be filthy, and pour the contents of such can, bottle, vessel or package upon the ground forthwith.

It shall be the duty of the inspector to make written entry in a book provided for that purpose, that he has condemned and destroyed so many gallons of milk or cream, and that he has taken samples of the same and has delivered them to the city food analyst for examination, and the said food analyst shall keep a correct account of each and every analysis or examination made by him, which shall be at all times open for inspection.

It shall be the duty of said inspector to keep a complete record of his proceedings as inspector, giving a full account of all inspections of milk made by himself, or his assistants, including the name of such person, firm or corporation, owning or claiming to own the milk so inspected, together with their places of business or residences, or the railroad station used for shipment or delivery thereof, and the results of the analysis in all such cases.

Any person who shall adulterate milk or cream or change it in any respect by the addition of water or any foreign or other substance, or by removal of cream therefrom with a view of selling or offering the same for sale or exchange, shall be deemed guilty of a misdemeanor, and upon conviction thereof be fined not less than twenty-five nor more than one hundred dollars for each and every offense, or by punishment in the house of correction in and for Milwaukee County not exceeding ninety days, or by both said fine and confinement.

Section 10. Any person, firm or corporation who shall sell, offer for sale, exchange, deliver, dispose of, or transport, convey or carry, or with any such intent as aforesaid, have in his or her care, custody, control or possession, any milk or cream having therein or containing any foreign or other substance or coloring matter, or any adulteration or preservative, whether for the purpose of artificially increasing the quantity of the milk or cream, or for preserving the condition of sweetness thereof, or for any purpose whatever, shall be deemed guilty of a misdemeanor, and on conviction thereof shall be fined not less than twenty-five nor more than one hundred dollars,

or punished by confinement in the house of correction in and for Milwaukee County not exceeding ninety days, or by both said fine and confinement, for each and every offense.

Section 11. No milk or cream shall be sold, kept, offered or exposed for sale, stored, transported, exchanged, carried, delivered, or in any manner disposed of, drawn from cows within fifteen days before, and twelve days after parturition, nor shall the same be mixed with any other milk or cream for such purpose. Any one so offending shall be deemed guilty of a misdemeanor, and on conviction thereof shall be fined not less than twenty-five nor more than one hundred dollars, or punished by confinement in the house of correction in and for Milwaukee County not exceeding ninety days, or by both said fine and confinement, for each and every offense.

Section 12. No milk shall be kept, sold or offered for sale, stored, exchanged, transported, conveyed, carried or delivered, or with such intent as aforesaid be in the care, custody, control or possession of any one if it contain more than 88 per centum of water fluids, or less than 12 per centum of total solids, of which total solids three of the per centum shall be butter fat.

Any milk shall be held to be adulterated which does not contain at least 3 per centum of butter fat, or which contains more than 88 per centum of watery fluids; or less than 9 per centum of solids exclusive of butter fat.

Offenders under this section shall be deemed guilty of a misdemeanor, and on conviction thereof be punished by a fine of not less than twenty-five nor more than one hundred dollars, or by confinement in the house of correction in and for Milwaukee County not exceeding ninety days, or by both said fine and confinement, for each and every offense.

It shall be the duty of the Commissioner of Health to recommend for cancel the license of any person or persons, or firm or corporation which shall have been convicted three times in any one year, for a violation of the provisions of the foregoing section.

Section 13. No cream shall be sold, offered for sale, exchanged, delivered or transported, or carried for purposes of sale, offering for sale, exchange or delivery that contains less than eighteen (18) per centum of butter fat, or that is taken from any impure, diseased, unhealthy, unclean, adulterated or unwholesome milk, or milk to which any foreign substance of any kind has been added, or milk from cows fed on refuse or slops from distilleries, vinegar factories, or any similar slops, mash or refuse, or any other than good and wholesome food.

Offenders under this section shall be deemed guilty of a misdemeanor, and on conviction thereof shall be fined not less than twenty-five nor more than one hundred dollars, or punished by confinement in the house of correction in and for Milwaukee County not exceeding ninety days, or by both said fine and confinement, for each and every offense.

Section 14. No person shall manufacture, sell, or offer for sale any condensed or evaporated milk or cream for domestic use, unless the same shall

be put in packages upon which shall be distinctly labelled or stamped the name or brand by whom or under which the same is made. No condensed or evaporated milk or cream shall be made, sold or offered for sale, exchanged or delivered for domestic use, unless the same is manufactured from pure, clean, healthy, fresh, unadulterated and wholesome milk, from which the cream has not been removed, or unless the proportion of milk solids and butter fat contained in the condensed or evaporated milk or cream shall be in amount the equivalent of milk solids and butter fat as provided by this ordinance.

For any violation of this section, the offender shall be deemed guilty of a misdemeanor and fined not less than twenty-five nor more than one hundred dollars, or punished by confinement in the house of correction in and for Milwaukee County not exceeding ninety days, or by both said fine and confinement, for each and every offense.

Nothing herein shall be construed to prevent the addition of sugar in the manufacture of condensed or evaporated milk.

Section 15. Nothing in this ordinance shall be so construed as to prohibit the use or sale of what is known as buttermilk, provided the same is produced from pure and wholesome milk. Should any buttermilk, however, be sold, kept, offered or exposed for sale, exchanged or transported, conveyed or carried, or be in the care, custody, control or possession of any one with the intent as aforesaid, which is not the product of pure and wholesome milk, the offenders shall be deemed guilty of a misdemeanor, and on conviction thereof be fined not less than twenty-five nor more than one hundred dollars, or be punished by imprisonment in the house of correction in and for Milwaukee County not exceeding ninety days, or by both said fine and confinement, for each and every offense.

Section 16. Any officer or employee of the Health Department who willfully connives at, or assists in a violation of the provisions of this ordinance, shall, on conviction thereof, be punished by a fine of not less than one hundred nor more than two hundred dollars, and shall at once forfeit his office.

Section 17. All milk and cream from sick and diseased cows, or cows fed on refuse or slops from distilleries, vinegar factories, or any similar slops, mash or refuse, or that is dangerous, or that may effect or be detrimental to life or health, shall, upon discovery thereof by analysis or test made, or otherwise, be confiscated, forfeited and immediately destroyed by or under the direction of the Commissioner of Health, who shall, if done in good faith, be held harmless in damages therefor, in any suit or demand made.

Section 18. If any cow be sick or diseased, the owner or person in charge thereof shall not sell, offer for sale, exchange, deliver or keep or expose for sale, exchange or deliver the milk or cream thereof, but shall at once destroy the same. If, in the opinion of the Commissioner of Health or any inspector, any cow is afflicted with a contagious or infectious disease, he shall direct the owner or person in charge thereof to forthwith remove said cow from

the premises to a place where it may not spread or cause contagion or infection. A violation of this section shall be deemed a misdemeanor, and on conviction thereof the offender shall be fined not less than twenty-five nor more than one hundred dollars, or be punished by imprisonment in the house of correction in and for Milwaukee County not exceeding ninety days, or by both said fine and confinement. If the said cow is, by the Commissioner of Health, or any inspector, deemed incureable, and the owner or person in charge thereof does not consent to its being killed, said Commissioner of Health shall notify the state veterinary surgeon, as provided by law.

Section 19. Every hotel keeper, restaurant keeper, boardinghouse keeper, or any other person who furnishes milk or cream for food, shall be in all respects subject and amenable to the provisions of this ordinance, saving and excepting the obtaining of license.

Section 20. All cow stables in the City of Milwaukee shall be thoroughly washed out, and thoroughly cleansed at least once a week. For a failure to do so the offender shall be deemed guilty of a misdemeanor, and on conviction thereof be fined not less than twenty-five nor more than one hundred dollars, or be punished by confinement in the house of correction in and for Milwaukee County not exceeding ninety days, or by both said fine and confinement, for each and every offense.

Section 21. All persons, firms or corporations who own or keep a dairy in the City of Milwaukee, or who send milk to said city, shall maintain their premises free from any accumulation of refuse matter or offal, which shall be removed frequently, so as not to endanger the public health, or the health or cleanliness of the cows.

Section 22. No person or persons, firm or corporation, shall keep or have in his or her possession any slops or refuse of any distillery, or vinegar factory, or any similar slops, mash or refuse to feed the same to any milch cow or cows. Each day's failure to comply with this section shall subject the offender to a fine of not less than twenty-five dollars.

Section 23. All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

Section 24. This ordinance shall take effect and be in force from and after its passage and publication.

This ordinance, if enforced, will remove some of the evils mentioned; it will improve the quality of the milk and still further decrease the death rate among children.

BAKERIES AND CANDY MANUFACTURIES.

The importance of the work done by the Health Department in causing systematic examinations of food, its preparation and handling, is shown in the improved condition of the

bakeries and candy manufacturies. In the last annual report it was stated that after an examination of 247 bakeries in this city only 53 were reported as clean and in good sanitary condition. Since the examinations were commenced every bakery and candy manufactury is examined as often as the inspector can visit them; and since the passage of the ordinance making cleanliness imperative there has been decided improvement.

During the past three months 275 bakeries and candy manufacturies have been inspected, and only 22 of this number were reported to this office for failing to comply with the provisions of the ordinance; and when the proprietors were served with a notice calling attention to the matters complained of in nearly every instance they hastened to correct the difficulty.

The principal complaints made were that the floors in the work rooms were not kept as cleanly as they should be, and that some of the cloths used in the various processes should be renewed.

The conditions found in the bakeries within the city of Milwaukee were made known to the members of the Legislature during its last session, and as a result an investigation was had and a law enacted which is much more stringent in its provisions than the city ordinance. This law, however, does not make provision for carrying its requirements into effect. It provides that local Boards of Health "may enforce the provisions of this act," but does not require that the provisions shall be enforced. The act is as follows:

"AN ACT relating to bakeries and persons employed therein.

The people of the State of Wisconsin, represented in Senate and Assembly, do enact as follows:

Section 1. All buildings occupied as biscuit, bread and cake bakeries shall be so drained and shall be provided with such a system of plumbing as shall conduce to the proper and healthful condition thereof.

Section 2. Every room used for the manufacture of flour or meal food products shall have, if deemed necessary by the authority invested with the enforcement of this act, an impermeable floor of hard wood, properly saturated with linseed oil. The sides, walls and ceilings of such rooms shall be

plastered or wainscotted, and shall be whitewashed at least once in six months. The furniture and utensils in such rooms shall be so arranged that the furniture and floor may at all times be kept clean and in a proper and healthful sanitary condition.

Section 3. The manufactured or meal food products shall be kept in perfectly dry and airy rooms, so arranged that the floors, shelves and all other facilities for storing the same can be easily and perfectly cleansed.

Section 4. Every such bakery shall be provided with a proper wash-room, soap and towel, and water-closet or closets, with ventilation, apart from the bake-room or rooms where the manufacturing of such food products is conducted; and no water-closet, earth-closet, privy or ash-pit shall be within or communicate directly with the bake-room of any bakery.

Section 5. The sleeping places for the persons employed in a bakery shall be separate from the room or rooms where flour or meal food products are manufactured or stored.

Section 6. Any person who violates any of the provisions of this law, or refuses to comply with any of the requirements of the authority vested with its enforcement, as provided herein, shall be guilty of a misdemeanor, and on conviction shall be punished by a fine of not less than twenty nor more than fifty dollars for a first offense, and for a second offense by a fine of not less than fifty nor more than one hundred dollars, or by imprisonment for not more than ten days, and for the third offense and every succeeding offense by a fine of not less than two hundred and fifty dollars and by imprisonment for not more than six months, or by both such fine and imprisonment.

Section 7. The owner, agent or lessee of any property affected by the provisions of sections 1, 2 or 4 of this act, shall, within sixty days after service of notice requiring any alteration to be made in or upon such premises, comply therewith. Such notice shall be in writing, and may be served upon such owner, agent or lessee, whether personally or by mail; and a notice mailed to the last known address of such owner, agent or lessee shall be deemed sufficient for the purposes of this act.

Section 8. The Board of Health of a city or town in which a bakery is situated, or in which the business regulated by this act is carried on, may enforce the provisions of this act and may cause copies of the same to be printed and posted in all bakeries and places in which such business is carried on within their respective jurisdictions.

Section 9. This law is to take effect from and after the date of its passage, and all laws and parts of laws inconsistent herewith are hereby repealed."

It is a step in the right direction and subsequent legislation may supply the amendatory requirements necessary to enforce the several provisions.

CITY WATER.

The report of Dr. Bennett, the Food Analyst, contains statistics relating to the condition of the water supplies—both lake water and the supply from wells.

Many of the wells were found contaminated, and the water unfit for use.

The water taken from 77 wells was found so impure as to be dangerous to health in 56, and in 14 others the water was fouled, a total of 60 out of the 77. Of those found to be contaminated 38 were within 20 feet of a privy, or the drainage from a barn, and 61 were found to be within 40 feet of a source of contamination. Sickness was reported from 27 of the houses supplied by these wells, and 13 of the cases of sickness were typhoid fever.

It is sometimes difficult to convince people that an old well within a few feet of a vault or cess pool will eventually become contaminated by the seepage from the vault, but the annalysis made demonstrates the contamination beyond a doubt.

In one instance the Analyst reported the water from a well excessively foul, and that it had the odor of decomposing matter. It was afterwards ascertained that the well was located at the base of a hill close to one of the cemeteries.

In the report from the department made for the year 1896, attention was called to the condition of the lake water as determined by analysis during the time when it was alleged that garbage was being dumped into the lake at Mequon and for some months thereafter. At that time analysis of the water showed that elements rendering it unfit for use for drinking were above the danger limit.

During August and September of 1896 the two agents—albuminoid and free ammonia—were found on analysis to be high, in excess of the quantity known to be dangerous to health. During the corresponding months of 1897 they were very much below the danger line, showing that the lake water was vastly improved, and fit to drink, and has so continued.

The tables appended to Dr. Bennett's report show the state of the water for each week in the year.

The work done by the Food Analyst demonstrates the practical value of laboratory work.

PUBLIC SCHOOLS.

During the past year inspections of the school buildings have been continued. Six hundred and fifteen separate examinations have been made from time to time, some of them supplemented by critical examinations made by physicians connected with the Health Department; and five hundred and fifty-one inspections have been made of the parochial schools.

Those schools found to have the greatest number of imperfections have been examined most frequently.

After each inspection of a public school in which defects have been found, a report of the condition has been forwarded to the Superintendent of Schools and to the Director in whose district the school is located.

Aside from poor ventilation the principal defects reported have been offensive urinals (of which there were 34) and filthy latrines; imperfect supply of water; plumbing out of order; leaks in pipes; dirty towels and unclean cups.

In these schools there have been many improvements made in the plumbing, in replacing worn out floors, and in some the ventilation has been improved, but there is great need of improved ventilation in most of the schools, and it is an evil which should be corrected at once.

There is no excuse for lack of ventilation in so many schools. It will cost some money to make necessary alterations, but provisions should be made without delay to supply pure air to every school room in the city, and not compel children to be slowly poisoned by remaining in impure air.

In the First District School the ventilation at times is quite poor throughout the building, ventilation is obtained by means of opening windows, as the ventilators are practically

useless. In the second grade of this school the ventilation is worse than nothing, inasmuch as coal gas finds its way into the room through what should be the ventilating shaft, so that the air is often very foul. In the third grade the ventilation is also poor, fresh air being obtained through open windows, the ventilators do not supply the rooms with air. This is also true of the fourth grade, which is also ventilated through the windows or not at all.

In the Deaf Mute School in the Second Ward the ventilation is poor at times, and it is impracticable to use the play room because it is damp and the air is contaminated.

In the Second District School the boys' closets are not properly ventilated, and there are several other defects in this school; in very cold weather the heating apparatus appears to be insufficient to supply the necessary degree of warmth.

In the water closets connected with the girls' department the light is so poor that it necessitates burning a gas jet in the day time. The ventilation is imperfect, particularly in the sixth grade class room.

In what is called the old building in the Second District, the ventilation is very poor.

In the Third District School the ventilation is imperfect, and the establishment is much in need of general repairs.

In the Fourth District School assembly room, fourth grade, the ventilation is poor, apparently because of improper arrangement of air shafts.

In the Fifth District the ventilation is by no means perfect, while in the Fifth District Primary the odor from the water closets finds its way to the cold air shaft through which fresh air is supposed to be supplied to the building.

In the Fifth District Primary No. 2 ventilation is obtained through open windows.

The Seventh District School is in bad condition throughout; ventilation is especially bad.

In the Eighth District School No. 1 the ventilation is generally poor. On the second floor it is at times quite bad.

Ventilation should be improved throughout the entire building.

In the Eighth District No. 2 the ventilation is poor with the exception of some rooms. In some of the air shafts, which are supposed to bring fresh air into the building, air from one room finds its way into another. The plan of ventilation is reported as good with the exceptions above referred to, but the amount of air supplied to individual rooms is not sufficient to make the ventilation what it should be. One defect which should be remedied without delay in this building is the narrow, tortuous stairways; in case of an alarm of fire they would prove extremely dangerous as there is no fire escape connected with the building.

In the Tenth District Primary No. 1 the ventilation is imperfect, also the Tenth District Primary No. 2.

In the Eleventh District Primary No. 1, room A, first grade, the air was found very bad, two windows having to be kept open for the space of six inches. In the fourth grade, room C, many of the seats are too small for the pupils, compelling them to sit in a twisted position, so that the feet are in the aisle. In the fourth and fifth grade, room B, ventilation is very poor. In the sixth grade A and seventh grade B, ventilation is imperfect, and in fourth grade C and third grade A, ventilation is very poor. In the eighth grade ventilation is imperfect, and in fourth grade C and third grade A ventilation is very poor. In the eighth grade ventilation is imperfect, and windows in all of the rooms are kept open when possible, in winter as well as in summer, to admit of a supply of fresh air.

In the Eleventh District Primary the ventilation in many of the rooms is imperfect.

In the Twelfth District School the ventilation is imperfect, windows are kept open to admit fresh air. Ventilation is very poor throughout the building.

In the Twelfth District Primary the ventilation is better.

In the Thirteenth District Primary No. 1 ventilation is bad throughout; and the seats in this school need readjustment,

some of them are unsuitable, cramping the movements of the children. In the second grade room, which is a barrack at the side of the main building, there is no ventilation except by means of windows, and as might be expected, headaches are a great cause of complaint.

In the Thirteenth District Primary No. 2, second grade B, the air is in bad condition. The ventilation is imperfect throughout the entire building, and the same condition exists in the Thirteenth District No. 3, and in addition to poor ventilation the heating is insufficient in cold weather.

In the Fourteenth District School there is a strong odor from the latrines permeating the building.

The Fifteenth District Primary, room 3, first grade, has no ventilation except by means of open windows, while the ventilation throughout the entire building is very bad, and in cold weather the heating apparatus is insufficient.

In the Sixteenth District Primary No. 1 the ventilation is poor. In the Seventeenth District there is a decided odor from the water closets which permeates the building. The ventilation is bad throughout.

In the Seventeenth District Primary the ventilation is poor in the third and fourth grades on the second floor, while the odor from the water closets permeates a number of rooms in the building.

In the Nineteenth District Primary No. 1 the ventilation in the fourth grade room is imperfect.

In the Twentieth District Primary ventilation is poor.

In the Twentieth District Primary No. 2 the ventilation is not what it should be, and at times the heating apparatus appears insufficient to warm the building.

In the Twentieth District Primary at times the odor is abominable, the ventilation being entirely inadequate.

There are in the schools enumerated other defects which can be remedied, but the great evil is imperfect ventilation; with a supply of air sufficient to provide proper ventilation,

some of the other evils complained of, as for instance, coal gas and the odor from latrines, would be removed, but in their present condition they are entirely unsanitary, and children should not be required to remain in them while this imperfect condition remains.

In the Sixth District School No. 1 there has been much complaint of the impure air, some of the teachers having been made ill through this cause. In this connection I desire to repeat statements made in the last annual report as to the necessity for perfect sanitation in our public schools, each room should be an object of special solicitude, and the standard of cleanliness should be as perfect as it is possible to make it. The floors should be swept once a day and scrubbed at least once a week; all hand-rails, door knobs, desks, and, in fact, all surfaces which will not be injured by the application of water, should be washed thoroughly with an antiseptic solution; water closets, toilet and cloak rooms should receive more than ordinary care, while during the recess from Friday to Monday all rooms should be thoroughly aired by opening the windows. The arrangements for drinking water should be kept scrupulously clean, for the reason that the dangerous contagious diseases, such as diphtheria and scarlet fever, may be transmitted more directly through the medium of the drinking cup than in almost any other way. If cups are used, their number should be increased very materially, and they should be thoroughly scalded, cleansed and wiped after each school day; preferably glasses should be used, for the joints of a tin cup make admirable nests for the generation of disease germs.

Children are proverbially careless; the teacher, already overburdened with the onerous duties required of them can not be expected to take charge of the sanitary conditions of the schools, even if they are well informed upon the subject. This work should be done by some one who visits the school from time to time for the express purpose of finding out the

true sanitary conditions, and who should be clothed with authority sufficient to see that all sanitary defects are promptly and entirely removed.

I also desire to repeat what has been said before concerning the necessity for a sanitary inspector, who shall be a thoroughly educated physician, familiar with sanitation, and who shall devote his whole time to the work of inspecting all departments connected with school sanitation. No greater need exists in any department of the city government than there is now for a competent person to perform the duties necessary to maintain our school buildings in a state of complete sanitation. All matters relating to this one feature should be governed by him. Wherever officials of this character have been appointed good results have followed immediately, and the sick rate among children attending public schools has been lowered.

In the City of Boston during the past year 8,964 children were examined by the inspector, and of this number 1,156 were found to be too ill to remain in school, 263 were found to have some infectious disease, which, by this examination was detected in its first stages, and doubtless prevented its extension to many others. Aside from acute infectious diseases, such as diphtheria, scarlet fever, etc., a large number of diseases called "catching" were detected, such as diseases of the eye, and of the ear, throat and nose, all of the sufferers being sent home until relieved of the disease, when they returned to their classes. In Cleveland, in Rochester and in many other places the work of inspection has been carried on for some time, and wherever instituted it has been followed by excellent results.

Medical inspection of the public schools of New York city for the week ending January 15, 1898, discovered 195 cases of infectious diseases or of parasites capable of being transmitted to others.

For the week ending January 29, there were 188 such cases reported, and for the week ending February 5, 1898, there were 125 cases (including diphtheria, scarlet fever, measles, and diseases of the eye, ear, etc.). During the week ending February 26, 2,534 children were examined, and of this number 135 were excluded from schools for the various causes named; 42 were cases of dangerous contagious disease, and 16 were cases of contagious eye disease; the balance were skin diseases or parasites.

In the cities where inspections are made and diseases or parasites communicable to others are discovered the affected children are sent home until the disease is relieved, or they are in condition to return.

It is quite right that any child having parasites should be prevented from attending school until free from them.

Medical inspectors also discover disorders of vision which sometimes produce headache and other troubles. In the City of Minneapolis last year, out of a total of 25,696 children thus examined, 8,166, or 32 per cent., were found defective in vision, and over 4,400 children complained after study. By such inspections defects of vision which may become very serious are discovered and relieved, besides removing the cause of headache or other irritations likely to be serious unless removed.

The usefulness of competent sanitary inspectors for public schools can not be over estimated in preventing the spread of contagious diseases.

Some action should be taken with reference to supplying proper drinking facilities in our public schools. Fourteen cups for fifty or sixty children are totally inadequate, and when these cups are washed only once or twice a month they are likely to become disseminators of disease. A greater number of drinking vessels should be supplied, and they should be thoroughly cleansed with scalding water after each day's service. Children are careless in all that relates to their

health, and unless the utmost precautions are observed the liability to extension of disease from one careless child is very great. During the past year one of the city schools became the center of infection for diphtheria, the exact cause could not be definitely determined, but after the school was closed and thoroughly cleansed, the disease, which had been continuous among the scholars attending that school, was entirely wiped out. In my opinion the necessity for a sanitary superintendent is great, and the appointment should not be longer delayed.

SMOKE NUISANCE.

In the annual report of this department for 1896 attention was called to the action taken relative to abating the dense smoke from chimneys, etc., and a statement was made that a printed copy of the ordinance was sent in a letter to establishments and corporations having smoky chimneys, informing them that the provisions of the ordinance would be operative on and after January 1, 1898.

A list of the places (112 in number) which had failed to comply with the ordinance was prepared during the month of January, 1898, and on February 4 the list was sent to the City Attorney with the following communication:

OFFICE OF THE COMMISSIONER OF HEALTH.
FEBRUARY 4, 1898.

Hon. Howard Van Wyck, City Attorney, City Hall, City:

Dear Sir—Enclosed herewith please find a list of factories, steamboats, railway engines and other institutions which are failing to comply with the ordinance relating to the emission of smoke from their chimneys, stacks, engines, etc.

Very truly yours,
WALTER KEMPSTER, M. D.,
Commissioner of Health.

Some establishments have introduced so-called "smoke consumers" and have demonstrated that there are appliances to remedy the nuisance which the ordinance was framed to prevent; if these appliances were made use of the dense, black

smoke would be consumed and the city relieved from this disagreeable destructive nuisance.

The tug boats, and river craft generally, are especially objectionable, and complaint is often made that the dense smoke from the boats, damages goods in shops contiguous to the river; and all such craft should be required to burn hard coal, or in some other way dispose of the volumes of dense, black smoke pouring from the stacks while they move upon the rivers through the city. As it is at present there is a total disregard of the rights of other persons or of their comfort or convenience, or of the damage done to goods by the volumes of soot laden smoke poured out of the stacks of the boats plying on the rivers, because the owners defy the requirements of the law.

There are several cities in this country where boat owners have been compelled to use hard coal while within the city limits, so as to prevent the out-pour of thick, black smoke; there is no reason why this should not be done here.

AVOIDABLE NOISES.

Attention is again called to the noises in the city which may be avoided. An ordinance was passed prohibiting "peddlers" and "hawkers" from shouting, blowing horns, etc., but the locomotives, steam boats and factories are still permitted to blow blasts upon steam whistles as long and as loud as they please, in complete disregard of the injury done to the sick by this species of torture, or of the discomfort and disturbance to thousands of citizens.

Within the city all whistle blowing should be prohibited, there is no necessity for it excepting, perhaps, in cases of imminent danger. It has been stopped in certain cities and no inconvenience to shipping or to railway traffic has been experienced.

The City of Detroit enforces the following ordinance, which has served also as a model for other cities:

CHAPTER CXXXIV.

Section 1. No person shall blow or cause to be blown the steam whistle of any steamer while lying at any wharf in the City of Detroit, or when approaching or leaving such wharf, except when absolutely necessary as a signal of danger or in the cases or under the circumstances prescribed by the laws and regulations of the United States requiring the use of such whistles.

Section 2. No person shall blow or cause to be blown a steam whistle of any locomotive within the limits of the City of Detroit, for the purpose of signaling to make up trains, or in any other cases than those which the laws of the State of Michigan prescribe and designate as requiring the use of such whistles.

Section 3. No person shall blow or cause to be blown within the limits of the City of Detroit the steam whistle of any stationary engine, as a signal for commencing or suspending work, or for any other purpose, except as specified in the fourth section of this ordinance.

Section 4. Nothing in this ordinance contained shall be construed as forbidding the use of steam whistles as alarm signals in cases of fire or collision, or other imminent danger, nor for the necessary signals by the steam engines of the Fire Department of the city.

Section 5. Any violation of, or failure to comply with the provisions of this ordinance shall be punished by a fine not exceeding one hundred dollars and costs; and in the imposition of any such fine and costs, the Court may make a further sentence that the offender be committed to the county jail or Detroit house of correction until the payment thereof, for any period of time not exceeding ninety days.

Section 6. That an ordinance entitled, "An Ordinance to regulate the blowing of steam whistles in the City of Detroit," which went into effect on the 30th day of June, 1873, be and the same is hereby repealed.

ILLEGAL PRACTITIONERS OF MEDICINE.

It was found upon investigation that a number of persons had located in Milwaukee who had procured "diplomas" from the "Wisconsin Eclectic Medical College," and other similar fraudulent concerns, one of which the Attorney-General of the

State investigated and found "was not organized in good faith, but was knowingly and willfully organized for the purpose of issuing diplomas in order to enable unfit and unskilled persons to practice medicine and to enable the organizers and promoters of said Milwaukee University to secure large sums of money for false and fraudulent diplomas, not only from the innocent and unsuspecting, but from ignorant and corrupt who desired the pretended authority to practice medicine for their own selfish purposes."

Many of these people had applied to this department for permission to register as physicians and surgeons, but were refused. During the year twenty-one of the number were compelled to remove the signs designating them as physicians, etc., from offices or dwellings, and several others left the city to avoid arrest.

A few who had attended regular medical schools, but had not received diplomas, were referred to the State Board of Medical Examiners; those who passed the examination were licensed to practice medicine, and those who were not successful were required to discontinue attempts to practice medicine in accordance with the law.

PUBLIC WATER CLOSETS.

Once more I desire to call attention to the necessity for public water closets in this city. It is time they were provided. For the small expense required to build and equip them there is no public improvement which would give better satisfaction or provide a convenience more generally needed.

VITAL STATISTICS.

A plan for keeping better records of the marriages, births and deaths, has been prepared during the year. At the last

session of the Legislature a law was enacted making provision for recording marriages, as follows:

AN ACT to regulate the duties of Registrars of Vital Statistics and to provide for the filing with them of marriage certificates.

The people of the State of Wisconsin, represented in Senate and Assembly, do enact as follows:

Section 1. The Registrar of Vital Statistics in all cities in which such officer does by law exist, shall keep a record of all marriages which may be celebrated in such city in the same manner, as nearly as may be, in which he is now by law required to keep a record of births and deaths.

Section 2. It shall be the duty of all persons or societies authorized to solemnize marriages by or before whom any marriage may be solemnized or contracted, in such city, to file with the Registrar of Vital Statistics a certificate of such marriage, in the same manner, and within the time now required for filing of such certificates with the Register of Deeds, by section 1022, of the Revised Statutes; and the Registrar of Vital Statistics shall transmit every week, all reports of marriages received for record from such persons or societies, to the Register of Deeds of any county in which such city may be located, taking his receipt therefor, and filing with the Registrar of Vital Statistics of such certificates, together with the receipt of the Register of Deeds for the same, shall be sufficient evidence of compliance with said section 1022, of the Revised Statutes.

Section 3. This act shall take effect and be in force from and after June 1, 1897.

To prepare for this additional work a plan was matured so that by means of the "Card index" used, all matters relating to marriages, births and deaths are recorded, and any fact relating to such entries may be found at once. Heretofore much time has been used in searching for entries made years ago, which are often required by attorneys, or in courts in this country and abroad, to establish marriages, births and deaths.

It will take some months to enter all registrations heretofore made upon the cards, but when this is done it will be a source of convenience to all who apply for such information.

The cards used are as follows:

Inspector's Number: e.	MILK

Name and Address:	License No.
....	....
....	....

Result of Analysis:	Temperature	Specific Gravity	Fat	Solids not Fat	Total Solids	Water	Ash
	.....	... .	.....	.....	.....	.....	.....

Warned..... ....Prosecuted..... ....

Feed..... ....Fined..... ....

Condition of Stables, Utensils, and Milk ....

.....Water Date..... No.....

Parts per 100,000

....

Place..... Owner..... .....

Appearance.....Color..... Odor.....

Reaction.....Phosphates.....Sulphates.....

Nitrates..... Nitrates..... Chlorides.....

Free Ammonia.....Alb. Ammonia.....Oxidizable Matter.....

Hardness—Before Boiling.....After Boiling.....

Total Solids.....Loss on Ignition.....Organic Residue.....

Microscopical and Bacteriological Examination.....

....

Classification ..... Analyst

JAN.

Diph.

No.....St. or Ave.....Ward.....

Date.....189....Name..... ....

Age....M. F....M. S....No. Case....Date first Case....Kind of House....

No. Fams....No. Adults....No. Children.....No. Sch. Children.....

Reported by.....M. D.....

Isolation—Home.....Hospital.....Result..... ....

Bac. Exam....True....Pseudo....Final Bac. Exam. No.....189..

Disinfected.....189..... .....Milk supply.....

Treatment—Anti-Tox....City....Other....Not used....Water supply...

Remarks.....Quarantine raised..... .....

Undertaker.....Date of Funeral.....

JAN.

Scarlet Fever.

No.....St. or Ave.....Ward.....

Date.....189....Name..... ....

Age....M. F....M. S....No. Case....Date first Case....Kind of House....

No. Fams....No. Adults....No. Children.....No. Sch. Children.....

Milk supply..... .....

Well water used.....

Reported by..... .....

Disposition Case—Hospital.....Home....Result..... .....

Disinfected.....189..... ....

Remarks.....Quarantine raised..... .....

Undertaker.....Date of Funeral.....

JAN.

Typho.

No.....St. or Ave.....Ward.....

Date.....189.....Name..... ....

Age....M. F....M. S....No. Case....Date first Case....Kind of House....

No. Fams.....No. Adults.....No. Children.....No. Sch. Children.....

Milk supply..... .....

Well water used.....

Reported by..... .....

Disposition Case—Hospital.....Home....Result..... .....

Disinfected.....189..... ....

Remarks.....Quarantine raised..... .....

Undertaker.....Date of Funeral.....

MARRIAGE.

Index No.....

Name..... ....

Volume.....If female, last name of husband.

Page..... ....

Number..... ....

Year..... ....

Month..... ....

BIRTH.

Index No.....

Name..... ....

Volume..... ....

Page..... ....

Number..... ....

Year..... ....

Month..... ....

DEATH.

Index No.....

Name.....

Volume.....

Page.....

Number.....

Year.....

Month.....

The contagious card enables the department to keep prominently in view the *houses* in which contagious diseases occur, as well as the name of the occupant, and any house wherein contagious diseases appear to be persistent is subjected at once to a full examination of plumbing, sewage or any other factors likely to be unsanitary.

The system is a great convenience and aid in keeping the records. The diphtheria cards are blue, scarlet fever red, typhoid fever yellow, milk cards white.

When arranged alphabetically in drawers made for the purpose the data may be obtained in a few moments.

DIPHTHERIA.

For the year 1897 there were 138 deaths reported as the result of diphtheria and croup. For the year 1896 there were 254 deaths from the same causes.

The cases reported in 1897 were 708, the number reported from the same cause in 1896 was 919, or 211 less than the number reported last year.

The number of cases reported is less and the percentage of deaths from the same cause is less; in 1896 the percentage of deaths from diphtheria was 27., in 1897, 19.63.

The deaths from diphtheria have steadily decreased since the use of antitoxine has increased, the great drop in number

of deaths occurred in 1896, when it first came into general use here. The following brief synopsis tells the story most eloquently:

Years.	Cases of Diphtheria.	Deaths.	Percentage of Deaths to Cases.
1893.....	620	273	44.03
1894.....	436	237	54.36
1895.....	375	179	47.73
1896.....	919	254	27.63
1897.....	708	138	19.63

Thirty cases of diphtheria were treated with antitoxine in the Isolation Hospital during the year, and all recovered. Last year twenty-two cases were admitted and all recovered. Fifty-two cases without one death. In one instance the disease was most persistent, ten thousand units being used before recovery; there were no unpleasant complications of any kind. Several of the cases admitted were severe, but all yielded promptly to treatment with the one exception noted.

Since the laboratory has been provided with instruments for making bacteriological examinations physicians in the city have made frequent requests to have the necessary examinations made. This determines with accuracy the facts, and has in some instances demonstrated that cases first believed to be diphtheria, were not so in fact.

The department has continued to furnish antitoxine to all who were unable to purchase it. This plan should be continued.

The method of inspecting premises whereon there are cases of infectious diseases has been continued; the hygenic conditions are carefully investigated, the water supply examined, and if from a well, the water is analyzed; and all unsanitary conditions are improved, if possible.

These examinations are recorded on a blank form, and a record kept of the same.

SCARLET FEVER.

During the year 1897 there were 89 cases of scarlet fever reported, and three deaths from the disease. The preceeding year there were 120 cases and four deaths.

TYPHOID FEVER.

Of typhoid fever there were 109 cases and 31 deaths in 1897, and in 1896, 133 cases and 46 deaths.

The death rate from typhoid fever should be greatly reduced if not practically eliminated.

On page 32 of the annual report for 1896, there is a quotation relative to typhoid fever, which is very valuable, as it shows that where typhoid fever once prevailed it has been almost stopped by keeping the drinking water pure. Where the water is pure and free from the germs of this disease typhoid fever at once subsides. But drinking water cannot be kept pure and free from these germs while sewage is forced directly into the lake or stream from which drinking water is taken, and only a short distance from the source of supply.

In Berlin, Hamburg, the Hague and other European cities where the water supply has been purified by filtration the deaths from typhoid fever have been reduced to a minimum, ranging from 9 to 2 in 100,000.

In the United States, where there are but few cities which have adopted methods of water purification, the death rate ranges from 97 to 29 in 100,000.

It is yet too early to expect radical changes to be made in this city for the purification of water, by filtration of sewage, which would largely prevent the deaths from typhoid fever, but the time will come when the people will demand it as a matter of public sanitation and for the good of all.

The manner in which typhoid fever may be communicated is shown by an investigation made recently in an eastern state. A case of typhoid fever occurred on a dairy farm, and from that one place the disease was spread broadcast through the milk.

Of 99 cases reported in one place 67 were traced directly to the dairy in question, while other cases had not been examined as to their starting point. Cases of fever occurred in three communities near by receiving milk from the same dairy above mentioned, which was a large one and supplied many customers. When shipments of milk were stopped, the fever began to disappear.

CONSUMPTION.

There were 346 deaths from consumption reported in 1897 and 335 in 1896.

The large number of deaths reported annually from "consumption" emphasizes the dangerous character of this disease. If the same number died annually from smallpox or diphtheria,, cholera or yellow fever, active measures would be adopted to check its spread.

The same active measures taken to check the spread of consumption would largely reduce the deaths from this disease; and among the first efforts made should be one to stop the spread of tuberculosis or consumption in milch cows. A method has been suggested in the ordinance proposed regulating the sale of milk.

Then the people should be informed of the contagious nature of the disease and that the same precautions should be used to prevent the spread of consumption that are now used to prevent the spread of smallpox or other dangerous, contagious diseases. The filthy and dangerous habit of expectoration should be stopped in all public places; there should be a systematic effort to educate the people concerning the plain facts now known about the contagious character of this disease and the ordinary methods by which it is conveyed from man to man. One of the principal modes of transmission is by means of the dried expectoration from consumptives, the minute germs when dried in the sun are blown about, and find lodgment in the throat and lungs, there forming a nest from which

the disease gradually spreads, destroying the tissues and eventually killing the person.

The greatest care should be observed in the public schools that the utensils for supplying drinking water should be kept scrupulously clean, as consumption may be communicated by the germ being deposited on the cup by a consumptive, and then taken into the mouth of the next person using the same cup.

Pure air, pure water, general cleanliness, and hygienic precautions, with the knowledge that the disease is contagious and can certainly be communicated from one to another unless caution is used, will assist in lessening the number now annually sacrificed because of the lack of information concerning the contagious character of this disease.

Early in the year 1897 the department began using Formaldehyde gas for disinfecting rooms, clothing, etc., in houses where contagious disease had occurred, instead of sulphur fumes. The apparatus is known as the "Trillat Autoclave," and it has been found effective and convenient.

It possesses many advantages over the old method. The gas is a better germicide, it is more easily managed, and does not discolor fabrics or wallpaper, nor does it tarnish bright metal work, of which there was much complaint when sulphur was used.

No action has been taken to provide by ordinance or otherwise, for the vaccination of children, or to prevent the spread of epidemic diseases should they appear here, as they will do, sooner or later. At the present time, February, 1898, smallpox is reported from ten southern states, where many of our people spend parts of the winter and spring months.

Attention has been called to the lack of such legislation in each of the reports issued by this department, and from time to time by statements made to committees, or to individual members of the Common Council. Some provision should be made at once to prevent the spread of epidemic diseases.

If such legislation is deferred until the disease is upon us, then it is likely to be hasty and ill considered. Such diseases may come at any time; the community should be protected so that when they come this department may act in accordance with law, and be prepared for any emergency.

A CHAPTER ON GARBAGE.

Since the date of the last annual report the contract for the disposal of garbage and dead animals, made between the City of Milwaukee and the Wisconsin Rendering Company, has terminated.

So many persons have asked for an explanation of the contract and why a new contract has not been executed, that an outline of the whole subject is presented for the information of all concerned.

On the 12th day of March, 1892, a contract was entered into between the City of Milwaukee and one Henry A. Fleischmann, which provided that the contractor should collect all slops, offal, garbage, dead animals and animal matter in the City of Milwaukee for the period of five years; that this material was to be conveyed to the Town of Mequon in Ozaukee County, and there treated by a process which had received its name from its inventor, Merz; and as compensation for the work performed said Fleischmann was to receive therefor the sum of forty-three thousand dollars ($43,000) per annum for five years for collecting the garbage and dead animals in the City of Milwaukee and transporting them to the works located in the Town of Mequon, and a further sum of twenty-five thousand dollars ($25,000) for the first year, twenty-seven thousand dollars ($27,000) for the second year, and so on an additional two thousand dollars ($2,000) for each year until the end of the five years, the contract to begin ninety days after the date named, viz., March 12th, 1892.

The contract provided that all of the garbage should be treated by the Merz process, and that "all liquids of whatever

kind from said works" should pass "through sand filters before discharging the same into Lake Michigan or purify the same by some other process satisfactory to the engineer of said city." It was further provided that the contractor should collect the garbage and dead animals "in odorless sanitary dumping carts," and that the garbage should be collected at least three times per week from each house between the 1st of May and the 1st of October in each year, and at least twice per week between the 1st of October and the 1st of May in each year, but that the collections should be made more frequent during either of these periods if it was thought best by the Commissioner of Health. This contract was signed by Henry A. Fleischmann and Dr. U. O. B. Wingate, then Commissioner of Health. For the faithful performance of the contract a bond was given for $50,000, the bondsmen being Henry A. Fleischmann, F. E. Gross and Charles Polacheck. On the 7th day of April, 1892, the above mentioned contract was assigned to the Wisconsin Rendering Company, of which F. C. Gross was President, and Charles Freiderich was Secretary.

On the 27th day of June, 1892, the apparatus at Mequon not being ready to treat the garbage in accordance with the terms of the contract, and the ninety days' time allowed by the provisions of the contract having expired, the Common Council by resolution extended the time for sixty days from that date, and authorized the contractor to dispose of the garbage outside of the city limits by dumping it upon farms and plowing it under, and this method was continued until the plant at Mequon was ready to treat the garbage in accordance with the terms of the contract. Just when the plant was completed is not a matter of record; the only document in this department which bears upon the subject is an invitation extended by the Wisconsin Rendering Company to the Mayor, the Common Council and the city officials of Milwaukee inviting them to inspect the plant on the 17th day of June, 1893. The several bills audited by the then Commissioner of Health, each has written across

its face "Approved with the understanding that the city waive no rights to enforce all provisions of this contract," which proviso appears upon the face of every bill up to and including that for the month of May, 1893; this appears to indicate that the Mequon plant was not ready to treat the garbage by the Merz process until about that date. Thereafter the garbage was removed from the city and taken out to those works until the expiration of the contract, as hereinafter stated.

All the work to be performed within the city limits was to be done under the supervision of the Commissioner of Health, but there was no penalty clause as a part of the contract, and in the event of a collector failing to do his duties in a proper manner the authorities could request the removal of the collector, but there was no provision for compelling this to be done, except that of bringing suit against the bondsmen. It was not long before the collectors learned this; and from this cause the failure to collect garbage became a source of annoyance to a great many citizens, and the Health Office was burdened with complaints arising from the non-collection of garbage, especially during the summer months. An officer was detailed, whose duty it was to examine into all of the complaints made, and attempt to secure better collections, but the effort was not successful although the officials connected with the Rendering Company were notified almost daily of the defects in the method of collection. This unsatisfactory state of affairs continued to increase until July 9th, 1894, when the Commissioner of Health called the attention of the Common Council to the existing state of affairs in a communication addressed to that body, which contains the following language relating to the subject:

> It has become necessary for me to call the attention of the agent of the Wisconsin Rendering Company, who visits the Health Department daily, to the fact that the collection of garbage in the city is not satisfactorily performed, and has not been performed in accordance with

the terms of the contract. This statement has been made to the agent of the company nearly every day that he has visited the Health Department, for one month past. Notwithstanding that their attention has thus been repeatedly called to the condition of affairs the complaints of the citizens of Milwaukee (each of which has been investigated by one of the inspectors connected with this department, and thus verified), increase in number. In many places in the thickly settled part of the city, garbage is not collected three times a week as is required by the contract, but in a very large number of instances it is collected only once in ten days or two weeks, and in a still greater number of cases only once a week. The subject has become one of serious importance or I should not now call the attention of your Honorable Body to the unfortunate condition of affairs.

I have had several personal interviews with Mr. F. C. Gross, the President of this company, and he has on each occasion assured me that the matters complained of should be remedied at once. Not only is this not the case, but the condition grows worse from day to day, and the number of legitimate complaints continually increase; that the Health Department may be relieved from censure, I have deemed it to be my duty to lay the facts before you that your Body may take such action in the premises as seems proper.

During the month of June there were 471 complaints made to this office. The investigations clearly indicate that the difficulty is an insufficient number of collecters, those now engaged in collecting cannot cover the ground assigned to them. The districts are too large, and it is impossible for the men to make the rounds as often as the contract requires it to be done; and during the hot weather collections should be made at least three times a week.

This is a matter of great importance, the foul odors arising from the decomposing garbage will certainly have an unfavorable effect upon the health of the city if the difficulty is not corrected.

Complaints from citizens lessened for a time after the communication was submitted, but it was not long before the collectors became as lax as formerly, and it seemed to be impossible to cause the material to be collected as provided for

in the contract, notwithstanding the continuous effort of the department.

During the year 1896 my attention was called to the circumstance that the shore of the lake in both directions from the garbage plant at Mequon was thickly strewn with garbage, washed up after each heavy wind, and at the same time certain persons engaged in wholesale fishing, living in the neighborhood of Port Washington and above, entered complaints that garbage was being thrown into the lake by some parties connected with the establishment at Mequon. Further investigation disclosed the fact that on one occasion a boat load of garbage was thrown overboard from the scow during the month of November, 1895. The statements made seemed to warrant further investigation, and I personally visited and examined the beach line for a considerable distance both ways, that is, north and south of the plant. I also visited Port Washington, and there obtained affidavits from parties who had been engaged in the business of fishing for six years, and who testified under oath that they were familiar with the lake shore from Mequon to Amsterdam, and that their business took them almost daily, during the fishing season, over the lake between these two points. They testified that prior to June, 1896, they had never had trouble with garbage collecting in their nets (these nets extend from the shore out into the lake a distance of about one and a half miles), and that any material floating in the lake would be caught in the meshes of the nets; that after the 1st of July of that year they had continual trouble with garbage collecting in their nets in such quantities that it was necessary for them to take them up and clean them out and remove the garbage nearly every other day, because the collected garbage moving in the nets frightened the fish away. That on more than one occasion, while engaged in their business going to and from their work in a steam launch, they passed through large quantities of floating garbage, covering the water, as they testified as much as two acres in extent floating close together, so that the garbage

continued to interfere with their work so greatly that eventually it became necessary for them to abandon these fishing waters as neither white fish or trout would stay where this material is found. Before abandoning these waters, however, they consulted an eminent lawyer in the City of Milwaukee, for the purpose of finding out whether there was not some law which would prevent the garbage from being thrown into the water, and that this consultation took place during the month of August, 1896. They testified further that they had followed the business of fishing in these waters for about twenty years, always along the west shore of Lake Michigan in the neighborhood of Port Washington, north and south, and never before the times above specified had they seen garbage cast up on the western shore after a strong east wind until after the year of 1893, and that it was cast up in unusually large quantities during the season of 1896. A number of affidavits of this character were secured by parties who had been similarly troubled by the accumulation of garbage in their nets; these statements being substantiated by affidavits and written statements of others who had been familiar with the conditions of the shore of the lake in this locality for years, and was further corroborated by the statements of parties employed at the Mequon works, who were familiar and had assisted in dumping garbage into the lake from the cars used to haul it from the boat into the plant. In order to satisfy myself still more directly as to the facts of the case, I took such measures as I thought would settle the question, and addressed a communication to the Common Council, to be mentioned hereafter.

When Hon. W. G. Rauschenberger, mayor of the city, was engaged in preparing his inaugural address, I suggested to his honor the propriety of calling the attention of the Common Council to the fact that the contract of the Wisconsin Rendering Company with the City of Milwaukee would expire during the year 1896; and thereafter, on the 21st day of April, 1896.

the Mayor said in his inaugural address: "I desire to call your attention to the fact that the contract for the removal of garbage expires in August, 1896, and I hope that you will in due time be prepared, and wisely dispose of this question."

On the 17th day of August following, a communication relating to the dumping of garbage into the lake was submitted to the Common Council, which is as follows:

OFFICE OF THE COMMISSIONER OF HEALTH,
MILWAUKEE, WIS., August 17, 1896.

To the Honorable the Common Council of the City of Milwaukee:

Gentlemen—It becomes my duty to acquaint you with certain facts concerning the disposition of garbage by the Wisconsin Rendering Company.

That you may fully understand the situation, I will quote a paragraph from the contract now in force between the Wisconsin Rendering Company, party of the first part, and the City of Milwaukee, party of the second part, to-wit:

The said party of the first part further covenants and agrees, to and with the said party of the second part, that he will erect in said county of Ozaukee, on land owned or leased by him, a first-class plant, including the necessary buildings, apparatus and machinery for the reduction and conversion of slops, offal, garbage, dead animals and animal matter, into merchantable products by means of what is known as the Merz system or process; said plant to have capacity sufficient and ample to promptly and daily dispose of all slops, offal, garbage, dead animals and animal matter, which shall be collected by said party of the first part in said City of Milwaukee, said plant to be equal in capacity, and of such greater capacity as from time to time be necessary." * * * "Said party of the first part to run all liquids of whatever kind from said works into and through sand filters before discharging the same into Lake Michigan, or purify the same by some other process satisfactory to the City Engineer of said city, etc." * * * "It is further stipulated that within ten days after the signing and sealing of this agreement by the respective parties thereto, that said party of the first part will make, execute and file with the City Clerk of Milwaukee

a good and sufficient bond to said City of Milwaukee, in the penal sum of fifty thousand dollars ($50,000), with sureties to be approved by the Mayor of said city for the faithful performance of each and every covenant of this agreement, on his part to be kept and performed."

The bond which is now on file in the office of the City Clerk, is dated March 22, 1892, and provides, among other things, that the parties mentioned therein "would collect all slops, offal, garbage, dead animals and animal matter in the City of Milwaukee," and transport the same to the garbage plant at Mequon, "and there promptly and daily dispose of the same in a sanitary manner by the Merz process."

The bond is signed by Henry A. Fleischmann, F. E. Gross and Charles Polacheck, and was approved on the same day by the Hon. Peter Somers, then Mayor of the city.

For the performance of this work, the City of Milwaukee pays each month the sum of $6,333.33, in accordance with the terms of the contract, which, as above stated, requires all garbage, offal, dead animals, etc., to be treated in a sanitary manner by the Merz system.

Certain facts came to my knowledge which led me to conclude that the Wisconsin Rendering Company were not disposing of the garbage in accordance with the terms of the contract, but I could get no direct evidence until the 5th day of August, 1896, when I had proofs that a considerable quantity of garbage, which is collected in this city and taken to the works at Mequon, is dumped into the lake during the night.

On the 1st day of August, 1896, between 8 and 9 o'clock p. m., twelve tram carloads of garbage were emptied into the lake from the pier connected with the garbage plant. Again on Monday, August 3, Tuesday, August 4, and Wednesday, August 5, between the hours of 7 and 9 p. m., on each of the above mentioned days, there were twelve tram carloads of garbage dumped into the lake from the pier; so that between Saturday, August 1, and Wednesday night, August 5, there were forty-eight tram carloads of garbage, dead animals and offal, just as it was collected from the city, emptied into Lake Michigan at the foot of the works thirteen miles north of the city.

Indications found along the shore line of the lake, extending each way from the plant, show that a large

quantity of garbage, offal, etc., has been cast up upon the beach, and may there be seen at this time, partly covered with sand, additional quantities being washed up after each storm from the east and northeast.

It has been customary to send a health officer on the boat which takes the garbage from Milwaukee to the works at Mequon to see that the material is not thrown overboard while on its way to Mequon, but it is after the garbage boat returns to Milwaukee that the contents of the tram cars are run out upon the pier and emptied into the lake as above mentioned.

I have had frequent conversations with Mr. F. C. Gross, President of the Wisconsin Rendering Company, relative to the capacity of the works at Mequon to dispose of the garbage in the manner contemplated in the contract, and he has at each conversation assured me that the works had sufficient capacity to treat greater quantities than the city furnished at this time.

I have communicated the facts above mentioned to Mr. Gross, and he has promised me that no more garbage should be dumped into the lake, but the proceeding is such a flagrant violation of the terms of the contract, that I laid the whole matter before his honor the Mayor, and after advising with him relative to the subject, concluded that it was my duty to lay the matter before your honorable body for such action as you may think proper to take.

I would respectfully suggest, however, that the Commissioner of Health be authorized to appoint an officer whose duty it shall be to stay continually at the works at Mequon to see that the garbage is disposed of in the manner set forth in the contract.

Since discovering that the garbage has been emptied into the lake, I have caused regular and systematic chemical examinations to be made of the lake water which was drawn from the tap in the laboratory in the city hall, after permitting the water to run therefrom for a considerable time.

Five examinations made have in each instance demonstrated the existence of materials considered dangerous to health, and show conclusively that the water is contaminated and not fit for drinking purposes until it shall have been boiled.

It may be difficult to prove that the material found comes from the garbage thrown into the lake, but it is a

well understood fact that this material is always found when large quantities of vegetable and animal matter undergo decomposition in water.

Therefore, I believe it my duty to recommend all persons to boil the water thirty minutes before it is used to drink.

Respectfully submitted,
WALTER KEMPSTER,
Commissioner of Health.

The communication was referred to the Committee on Health and the City Engineer.

That there might be no controversy as to the duty of the Commissioner of Health in auditing the bill for monthly payment to the Wisconsin Rendering Company provided for in the contract, the following letter was addressed to the City Attorney:

OFFICE OF THE COMMISSIONER OF HEALTH,
MILWAUKEE, August 19th, 1896.

Dear Sir—I have received a bill from the "Wisconsin Rendering Company, assignee of Henry A Fleischmann," amounting to the sum of $6,333.33, for the month ending August 25th, 1896, for "collection, transportation and disposal of the garbage, etc."

During the time covered by this bill I have learned that a portion of the garbage has not been disposed of in accordance with the terms of the contract, but that instead of daily disposing of the slops, offal, garbage, etc., by the Merz system or process, a portion of the garbage, etc., has been emptied into the lake, contrary to the arrangement made in the contract. Among other things the contract required that payments shall be made "on certificates of the Commissioner of Health, in equal monthly payments, for the destroying, converting and disposing of the said slops, offal, garbage, dead animals, animal matter, as above set forth, etc.," "to the satisfaction of the Mayor and the Commissioner of Health of said city."

The work has not been done to the satisfaction of the Commissioner of Health, the terms of the contract having been violated, and I withhold my signature from the monthly bill of the Wisconsin Rendering Company until

I shall have been informed by you of my duty under the circumstances; as it now appears to me the fact of auditing the bill would indicate that the work had been done to the satisfaction of the Commissioner of Health, but such is not the case.

An early reply will greatly oblige,

Yours very truly,

WALTER KEMPSTER, M. D.,
Commissioner of Health.

The reply of the City Attorney to the letter is given herewith:

OFFICE OF THE CITY ATTORNEY,
MILWAUKEE, August 22, 1896.

Dr. Walter Kempster, Commissioner of Health, City.

Dear Sir—I am in receipt of your letter of the 19th instant asking for my opinion as to your duties under the contract with the Wisconsin Rendering Company, as assignee of Henry A. Fleischmann, for the collection, transportation and disposal of garbage. It appears from the contract that the plant is to have sufficient capacity to promptly and daily dispose of all offal, garbage, etc., and to be of such greater capacity as may from time to time be necessary. I understand from you that a portion of the garbage transported to Mequon has not been reduced, but has been dumped into the lake, and that the only excuse for this method of disposing of it is the fact that the accumulations were greater than the capacity of the plant. The section of the contract to which I have just alluded shows that this is not a valid excuse, and inasmuch as the work has not been done to your satisfaction you are fully justified in withholding your signature and approval from the monthly bill of the said Wisconsin Rendering Company.

I return herewith a copy of the contract alluded to.

Yours respectfully,

C. H. HAMILTON,
City Attorney.

On the 25th day of August the Committee on Health reported that they were not ready to make report upon the preceding communications, and asked for further time, which request was granted. During the next few days a witness was

examined by this committee, who saw the garbage dumped into the lake as reported, a number of witnesses testified to seeing the garbage scattered along the lake shore for miles on both sides of the garbage plant, and several affidavits were presented from fishermen and others acquainted with the facts —and the contamination of the lake water was demonstrated by the analyses presented. Nothing further transpired until the 14th day of September, 1896, when the Committee on Health reported as follows:

To the Honorable the Common Council:

Gentlemen—Your Committee on Health and City Engineer, to whom was referred a communication from the Commissioner of Health relating and alleging violation of the contract on the part of the Wisconsin Rendering Company, and setting forth certain facts which indicated pollution of the water supply of this city due to the dumping of large amounts of garbage in the lake, etc., have given the subject referred careful and diligent examination.

The committee has heard at length the allegation of witnesses upon whose testimony the Commissioner of Health has based his charges. They have also heard read the analyses of the lake water by the Health Commissioner and others. A large number of witnesses were also examined in behalf of the Rendering Company. While the testimony is conflicting as to the main charges, viz., that a considerable amount of garbage has been disposed of by the company dumping in the lake, it is not sufficient in the estimation of your committee to confirm the statement of the Health Commissioner as to the extent and amount to which this practice has been carried on. That a considerable amount of garbage has found its way into the lake seems, to the committee, to be the fact from testimony taken, and from evidences and signs which appear in various places along the lake front. In the judgment of your committee the company has been derelict in the performance of its duties, and it feels that the officers of the company are to blame in the matter, and should be held responsible. The committee has visited the plant and looked carefully into the methods adopted by the Health Department for inspecting the disposal of garbage. It is inclined to hold the Health Commissioner

responsible for remissness in his duties in not establishing such watch and vigilance as should leave no opportunity or temptation for the disposal of garbage in any other way than that prescribed by the contract.

The committee also feels satisfied that the investigation will at least prevent any possible repetition of the offense complained of, and that a more rigid system of inspection, such as should have been adopted by the Health Department be enforced by said department, thus removing the possibility of any pollution of the lake water from sources named in the Health Commissioner's report.

We therefore recommend that the Commissioner of Health be and he is hereby directed to maintain such system of inspection and supervision over the works necessary to prevent any further improper disposal of the garbage.

And the following resolutions were adopted:

WHEREAS Dr. Walter Kempster, Commissioner of Health of the City of Milwaukee, in a communication to this Common Council, submitted August 17, 1896, makes the most positive declaration that he has actual knowledge and conclusive evidence and proof that the Wisconsin Rendering Company, or their assigns, a corporation under contract with the City of Milwaukee to dispose of the city's garbage, dead animals, etc., by cremating or burning the same, has grossly violated the provisions and stipulations contained in said contract by reason of dumping or throwing said garbage, dead animals, etc., into Lake Michigan; therefore

Resolved, By the Common Council of the City of Milwaukee, that the City Attorney be, and is hereby instructed to proceed forthwith and bring suit against said Wisconsin Rendering Company, or their assigns, and their bondsmen; and further

Resolved, That the proper city officers be, and are hereby instructed to withhold payment of any and all moneys which may now be due or which may become due under said contract with said Wisconsin Rendering Company, or their assigns, until further notice from this Council.

And moved, that the report of the Committee on Health and the City Engineer, the report of the Commis-

sioner of Health and foregoing resolution be referred to the Committees on Judiciary, Health and the City Attorney.

It will be observed that the committee considered the Commissioner of Health "remiss" in his duties because he did not deprive the Wisconsin Rendering Company of "opportunity or temptation" to defraud the city by violating the contract. It will also be observed that the committee reported to instruct the City Attorney to proceed forthwith and bring suit against said Wisconsin Rendering Company, but the "instruction" resulted only in the communication embodying it; no such suit was ever brought.

On the same day a resolution was introduced into the Common Council providing for the appointment of a special committee of five, who, in conjunction with the Health Commissioner, were required to examine "carefully" modern methods of disposal of city garbage, and consider the advantage of the city undertaking the work of disposal of garbage at the expiration of the present contract, and further, that said committee consider the advisability of the purchase of a site and the erection thereon of a plant or the purchase of plans offered the city, and report their conclusions to the Common Council at the earliest date practicable. The resolution was adopted, and the Chairman appointed the committee. At the next meeting of the Common Council, viz., the 28th day of September, 1896, the committee referred to above reported as follows, and presented the appended resolutions:

To the Honorable the Common Council:

Gentlemen—Your special committee and the Commissioner of Health appointed to inquire into the matters of the disposal of garbage with a view to the establishment of site, for the letting of contract at the expiration of present contract for the disposal of garbage, has carefully considered the subject referred, and reports as follows: The direction contained in the resolution is resolvable in two practicable propositions; one, having reference to the making of contract with private parties, and the other

contemplating the acquisition and maintenance of a garbage establishment by the city

In the opinion of your committee it would be advantageous to place the two propositions in such form as shall invite competitive bids or proposals—the city reserving the right to accept or reject without condition. To secure the aims of the resolution referred to your committee, we therefore recommend the adoption of the following resolutions:

Resolved, That the Board of Public Works be, and is hereby instructed to advertise that the city is contemplating the letting of a new contract for the collection and destruction of garbage and night soil; that competent parties able to operate under such contract in the county of Ozaukee be invited to present propositions for the complete and thorough removal and destruction of all garbage and night soil, specifying in proposition the methods and appliances to be used, capacity for performance of contract, and the cost of the same under specifications for terms of five years and ten years respectively; said proposition to be made upon condition that the city is at liberty to accept or refuse any or all offers made by contracting parties; and further

Resolved, That the Board of Public Works be, and is hereby authorized and directed to advertise for proposals to furnish the City of Milwaukee with necessary ground upon the lake front in Ozaukee County, upon which shall be erected in complete running order, a plant, with machinery, apparatus and all devices for the disposal of at least 100 tons of garbage and —— cubic yards of night soil per day; said proposals to be definitely made so as to include exact description of property with full details of buildings and apparatus, and accompanied with such plans as may be required to form the basis of negotiation by the city with a view to the acceptance of the same; such propositions to be conditioned upon the completion and turning over of the whole plant to the city on or before July 15, 1897.

Referred to the Committee on Health, the Commissioner of Health and the Board of Public Works.

Meantime, at the session held on the 12th day of October, 1896, the Committee on Judiciary and Health, to whom was

referred the communication concerning the dumping of garbage, presented the following report and resolution.

To the Honorable the Common Council:

Gentlemen—Your Committees on Judiciary and Health, to whom was referred the communication of the Commissioner of Health regarding the alleged non-performance of its contract by the Wisconsin Rendering Company, the report of the Committee of Health and the City Engineer thereon, and the resolution introduced by Ald. Baumgaertner instructing the City Attorney to proceed to bring such action against the Wisconsin Rendering Company and their bondsmen, and to withhold payment of all moneys now or hereafter to become due to said company until the further order of the Council, beg leave to report that they have had the matter under careful consideration and report thereon by the accompanying resolutions, and respectfully recommend their adoption:

Resolved, That the Commissioner of Health be, and he is hereby authorized and requested to audit all bills now, or hereafter to become due, of the Wisconsin Rendering Company under its contract with the city for collection, removal and disposition of garbage, except the amount claimed to be due by said company for reduction of said garbage from July 27 to August 27, 1896 (about two thousand dollars).

During the same session of the Common Council a resolution was introduced providing that a special committee of seven should be appointed by the Chairman of the Common Council to investigate the affairs of the city in connection with the contract of the Wisconsin Rendering Company therewith, and to ascertain whether or not the Wisconsin Rendering Company had performed its contract with the city, and whether or not "the city had suffered damage thereby," and they were directed to report the result of their investigations and their recommendations thereon to the Common Council "with all convenient speed;" which resolution was adopted, and the committee appointed on the 12th day of October, 1896, but at the date of this report (March, 1898) the committee had not yet been called together, and had never met.

To prevent the unloading of garbage into the lake from the cars at Mequon, a resolution was adopted as follows:

Alderman Doelger, from the Committee on Health, reported the following:

> *Resolved*, By the Common Council of the City of Milwaukee, That the Commissioner of Health be, and is hereby instructed to proceed without delay and cause a lock-bar to be placed on and over the Wisconsin Rendering Company's tramway, said lock-bar to be located at a point twenty feet west of the western end of their pier at Mequon, Wis.; and further
>
> *Resolved*, That it shall be the duty of every health officer who may be assigned to accompany the garbage boat as an inspector, to see to it that no tramway car, loaded or unloaded, shall remain east of said lock-bar when the boat leaves said pier for her return trip to Milwaukee.

The following substitute resolution was recommended and adopted:

> *Resolved*, By the Common Council of the City of Milwaukee, That the Commissioner of Health be, and is hereby instructed to proceed without delay, and cause a lock-bar to be placed on and over the Wisconsin Rendering Company's garbage tramway; said lock-bar to be located at a point not less than twenty (20) feet west of the western end of their pier at Mepuon, Wis.; and further
>
> *Resolved*, That it shall be the duty of every health officer who may be assigned to accompany the garbage plant as an inspector to see to it that no tramway car, loaded or unloaded, shall remain east of said lock-bar, when the boat leaves said pier for her return trip to Milwaukee.

And thereafter during the continuance of the contract the requirements contained in the foregoing resolutions were carried out.

Up to this time no action had been taken providing for the treatment of garbage after the contract with the Wisconsin Rendering Company should expire, and on the 23rd day of

November, 1896, his honor the Mayor, forwarded to the Common Council the following communication:

MAYOR'S OFFICE,

MILWAUKEE, Nov. 23rd, 1896.

To the Honorable the Common Council:

Gentlemen—In my inaugural address I called the attention of your honorable body to the fact that the contract for the collection and disposal of the city garbage with the Wisconsin Rendering Company, expires during the year 1897, and that your honorable body should take proper steps so that this so important matter could be treated in time, and in a wise and businesslike manner. A resolution introduced in the old council, which had been referred to the Committees on Finance and Health, but on which no action had been taken, was then before your board, no action was, however, taken until September 14th, when a resolution passed appointing a select committee of five, which, together with the Commissioner of Health, was to inquire into the matter of the disposal of garbage, and also to consider the advisability of the purchase of plants offered the city. The committee reported back to the council on the 28th day of September, a set of resolutions bearing upon the subject, which report was referred to the Committee on Health, Commissioner of Health and Board of Public Works, but no definite plan or any action or recommendation has been made since the last meeting of this committee took place a few days ago, and the matter was, as I am informed, laid over for two weeks more. The time, however, is getting so short that, unless your honorable body will take up this matter at once and instruct the committee to meet with the proper city officials and present to you some plan or proposition in a few days, the city will be placed in a position that it must accept the terms and propositions of the Wisconsin Rendering Company, or be in a dilemma, as it was six years ago, when it was compelled to dump the garbage in the lake.

This question is of so great an importance to our city, that you can no longer delay the same. In the year 1891 a law was passed authorizing the city of Milwaukee to purchase lands for the erection of a crematory, either in this or any other county, and it appears to me that by taking prompt action you are still able, by properly adver-

tising for different systems to erect a plant that can be completed by the end of March, in case you cannot make satisfactory arrangements with the present company, or ii it should appear that the city could save money by erecting its own plant. I therefore hope that your honorable body will take up this so important question without delay and bring it to an early and satisfactory solution.

Respectfully submitted,

W. G. RAUSCHENBERGER,

Mayor.

This was referred to the Committee on Health, and was supplemented by a communication from the Commissioner of Health, who had requested the City Attorney to furnish an opinion as to the precise date when the contract above referred to would expire. The opinion referred to is embodied in the communication as follows:

To the Honorable the Common Council of the City of Milwaukee:

Gentlemen—It becomes my duty to present to your honorable body the opinion of the City Attorney relative to the date when the contract of the city with the Wisconsin Rendering Company will expire. The opinion is as follows:

OFFICE OF THE CITY ATTORNEY,

MILWAUKEE, Nov. 17, 1896.

Walter Kempster, M. D., Commissioner of Health.

Dear Sir—In reply to your request for an opinion of this department, as to the time at which the contract of the city with the Wisconsin Rendering Company for the disposal of garbage expires, we will state.

By the words of the contract, the agreement expires on the 12th day of March, 1897. The resolution passed by the Council on June 26th, 1892, simply relieves the Wisconsin Rendering Company from the forfeiture of $20 a day, to which they would otherwise have been liable for failure to complete their plant on the day specified. But it does not appear to us that this resolution extends the time at which the whole contract expires for sixty days.

Respectfully yours,

(Signed.) C. H. HAMILTON,

City Attorney.

The contract referred to contains a clause relating to the purchase of the plant by the city, which provides that if the city wishes to purchase the plant the company must have sixty day's notice given to them, and they have thirty days in which to reply.

If a new contract is to be made with the present company or with some other one, considerable time must be consumed in advertising and arranging necessary details incident to such an important matter, involving as it does the expenditure of large sums of money annually.

Whether your honorable body will consider it best to purchase the present plant, advertise for a new one, or enter into a contract for the collection and disposal of the garbage of the city, there is but little time left in which to consider the subject; and those of you who remember the condition of affairs before the present plan was adopted, will realize the urgent necessity that exists to make immediate provision for the future collection and removal of this material before the present contract expires, that there may be no inconvenience to the citizens by reason of non-collection of garbage, or misunderstanding with the Wisconsin Rendering Company as to compensation after the present contract expires.

The attention of your honorable body was called to the subject by his honor the Mayor in his inaugural address, and the Commissioner of Health has repeatedly called the attention of your Committee on Health to the situation, urging the importance of prompt action.

The matter is of such great importance to every citizen that in view of the City Attorney's opinion I believe it to be my duty to call the attention of your honorable body to the present situation, and to the very brief time that remains in which to perfect some plan before the present contract expires on March 12, 1897.

WALTER KEMPSTER, M. D.,
Commissioner of Health.

This communication was referred to the Committee on Health, and a motion was made that "all matters pertaining to the disposal of garbage be recalled from the Committee on Health, Board of Public Works and Commissioner of Health, and referred to a special committee of five or seven and the Board of Public Works and Commissioner of Health, with in-

structions to report to the Common Council their action within three days, at a special meeting of the Council to be held for that purpose." But the effort to hasten the matter failed, and this motion was lost notwithstanding the requests made by the Mayor and the Commissioner of Health to prevent the procrastination which followed.

On the 7th day of December, 1896, a report with resolutions was presented to the Common Council by the Chairman of the Committee on Health, which is as follows:

To the Honorable the Common Council:

Gentlemen—Your Committee on Health, Board of Public Works and Commissioner of Health, to whom was referred a communication and resolution reported upon by a select committee with reference to the disposal of garbage and advertising for bids for the erection and equipment of garbage plant, etc., beg leave to report as follows:

Your committee has carefully considered the matter referred, and in relation to the same has prosecuted diligent inquiries as to the plans followed in other cities in the country. In connection with these reports the committee has also considered the peculiar conditions attending the problem of garbage disposal in the City of Milwaukee. The result of our deliberation the committee finds itself favorably disposed to the proposition included in the resolution passed upon by the special committee of five, and therefore report the same with slight changes for adoption in the form of a substitute.

Resolved, That the Board of Public Works be, and is hereby authorized to advertise for proposals to furnish the City of Milwaukee with necessary ground, not less than 10 acres in area, outside the City of Milwaukee, in the County of Milwaukee, or adjoining counties, for the erection thereon of a municipal garbage rendering plant; and further

Resolved, That the Board of Public Works be instructed to advertise for the letting of separate contracts for the collection and destruction of garbage, specifying the methods and appliances to be used, capacity for the performance of the contract, and the cost for the term of five and ten years respectively; and further

Resolved, That the Board of Public Works be directed to advertise that the City of Milwaukee is contemplating the acquisition and maintenance of a plant for the destruction of garbage, and that proposals will be received for the construction, erection and delivery to the city of a plant, machinery, apparatus and all devices for the disposal of at least 150 tons of garbage daily; such propositions to be conditioned upon the completion and turning over of the works on or before July 15, 1897. All bids, plans, specifications and proposals of any kind to be submitted to the Common Council.

It will be observed that this resolution provided for securing grounds, etc., outside the City of Milwaukee.

During the sessions of the committee held prior to the drawing up of this report, and the facts which had been pointed out to them that there was no legal authority enabling the City of Milwaukee to acquire property outside of the city limits with possibly two exceptions, the exceptions being for the purpose of bringing water into the city, or conveying sewage out of the city; notwithstanding the legal objections urged, the resolution was adopted to advertise for proposals for land outside of the City of Milwaukee upon which to erect a garbage plant, and considerable time was spent by the committee after proposals were received in visiting the sites offered. Then the objection which had been made that the city could not acquire title to lands lying outside its limits for this purpose were once more urged, and the objections were found to be correct, so that the time which had been taken and devoted to this purpose was entirely lost.

The Board of Public Works, meantime, had advertised for proposals and had received a number which were transmitted to the Common Council on the 18th day of January, 1897.

OFFICE OF THE BOARD OF PUBLIC WORKS,
MILWAUKEE, Jan. 18, 1897.

To the Honorable the Common Council:

Gentlemen—We herewith transmit to your honorable body the several proposals received by this board on January 15th, 1897, for furnishing a garbage disposal

plant to the City of Milwaukee. We also transmit bids received for the disposal of the garbage of the city.

S. J. BROCKMAN,
FRED. SCHNEIDER,
PAUL MUENZBERG,
Commissioners of Public Works.

The following proposals were transmitted, two from the Wisconsin Rendering Company, one for five years, in which the proposal specified that they would collect and dispose of the garbage and dead animals at the rate of six and three-fourths cents per one hundred pounds; one for ten years in which they proposed to do the same work for five and one-half cents per one hundred pounds; also from the same company a proposal to build and transfer to the city one disposal plant the Merz process, eighty tons capacity for each twenty-four hours, for the price of $78,500.00, or a similar plant, the Merz system, having one hundred and fifty tons capacity in twenty-four hours, for the sum of $126,000.00. All these bids were finally referred to the Committee on Public Buildings, Grounds and Health.

On the 1st day of March, 1897, the following letter was received, which modified an opinion previously given.

OFFICE OF THE CITY ATTORNEY,
MILWAUKEE, March 1, 1897.

Walter Kempster, M. D., City.

Dear Sir—Will you kindly advise me at once when the garbage plant of the Wisconsin Rendering Company was put in successful operation to the satisfaction of the Mayor and the Commissioner of Health. I understand it was June 25th, 1892, but would like to be definitely advised so that an official opinion, which has been asked for by the Committee on Health, may be promptly rendered. I desire to say to you now that the opinion of November 17th, 1896, was erroneous, and was evidently drawn with the idea that the legal effect of the resolution passed by the Council was simply to relieve the company

of the forfeiture. I return this opinion to you herewith as I borrowed it of you lately.

Respectfully yours.

C. H. HAMILTON,
City Attorney.

After this date there were several meetings of the special committee, at which the subject was discussed at great length, but without results, and on the 15th day of March, 1897, a communication was presented to the Common Council transmitting a letter received relative to what was called by the writer of that letter "The Arnold Improved Process," which upon investigation proved to be the Arnold process as in use in several places, without any special improvements or changes; but the communication served as a reminder that the subject was not yet settled, but no action was taken by the Common Council until the 5th day of April, 1897, when a communication was presented from the majority of the committee as follows:

To the Honorable the Common Council:

Gentlemen—The majority of your Committee on Public Buildings and Grounds and Health, to whom was referred the question of the disposal of garbage and the bids received by the Board of Public Works in response to advertisements authorized by this body by resolution adopted December 7th, beg leave to report that they have carefully considered the whole matter, and find that it is, in their judgment, to the interest of the public to reject all bids received, and therefore recommend that the same be rejected and placed on file.

Your committee offers the following resolution with the recommendation that the same be adopted:

Resolved, That the Board of Public Works be, and is hereby directed to advertise for proposals and bids for the collection and disposition of the garbage of this city for the ensuing five years, from the date of expiration of the present contract with the Wisconsin Rendering Company; said bids to be accompanied by such bonds as will guarantee the city the fulfillment of the contract in case the bids are accepted, and further to be accompanied by the full

statement of the parties making such bids of the manner or method to be employed in reducing or disposing of said garbage; and further

Resolved, That the said Board of Public Works advertise in such manner as shall enable bidders to present separate bids for the performance, respectively, of the work of collection of garbage, of transporting the same, and of reducing, rendering or disposal of the same, and further, to request persons bidding as required aforesaid, to present proposition for the turning over to the city any plant or apparatus used in the performance of the contract at such time and under such conditions as may be agreed upon by the city.

The report of the minority of the committee follows:

To the Honorable the Common Council of the City of Milwaukee:

Gentlemen—The (minority) of your Committees on Public Buildings and Grounds and Health beg leave to report that they dissent from the conclusions of the majority as expressed in their report. In the opinion of your minority it is not wise to reject all the bids.

The committee and the Board of Public Works have undertaken to execute faithfully the directions of the resolution requiring advertisement for propositions and bids with full and specific details and requirements; these bids have been carefully examined by the committee, and under the circumstances offers sufficient basis upon which the city may secure contract for the disposal of garbage at the expiration of the present contract.

We therefore recommend that the committee be permitted to have further time in which to present its report upon the question referred.

Growing out of the discussions had before the several committees appointed to investigate matters relating to the disposal of garbage, some statements had been made which the committee requested to be put in writing. In response to this request the Commissioner of Health presented the following:

To the Honorable the Common Council:

Gentlemen—In response to the request made by several members of your honorable body, I have the honor

to present herewith a statement concerning the cost of reducing garbage, also the cost of burning it in cremators.

The most complete report concerning the cost of burning garbage is from the City of Montreal, Canada, a city having nearly the same population as Milwaukee, that is, about 255,000. They have for some years been disposing of garbage by what is known as the Manlove-Alliott method, an apparatus in use in several cities abroad, but the only one in use on this side of the Atlantic that I know of.

The cost per ton for consuming garbage in this furnace is 83½ cents; the cost of collecting is 50 cents a ton; total, $1.33½, the entire work being done by the city. For collection they employ sixty-four collectors, with foreman and stablemen, and they use seventy-two horses, the entire cost of collection being 50 cents per ton.

Montreal is a very hilly city, and they would require as many collectors to perform the work properly as Milwaukee, if not more.

The only authentic record that I have relating to reduction works, that is, apparatus designed to treat garbage and extract from it saleable materials in the way of grease and fertilizer, is the one furnished by Col. George E. Waring, of New York City, who has devoted several years to the practical investigation of the garbage question. From him I obtained the following facts:

He states that from every 3,000 tons of summer garbage treated by different methods in different cities, the following is shown:

Average quantity of water in garbage.....71 per cent.
Average quantity of grease in garbage..... 2 " "
Average quantity of fertilizer in garbage.....20 " "

Thus there would be forty pounds of grease per ton of garbage and 400 pounds of fertilizer. The lowest average selling price for grease in a period of ten years has been 3 cents per pound. The average selling price of fertilizer has been $6.00 per ton. These prices are obtained in New York City.

The average daily collection of garbage in Milwaukee for the year 1896, was 83 tons.

Col. Waring estimates the average operating expenses of an 80-ton garbage plant, including fuel, labor and all incidental expenses, at $45,250 per annum, so that if the 83 tons yielded 4,800 pounds of grease and it was sold at

2½ cents per pound, the total would be $120.00; 14 tons of fertilizer at $6.00 per ton would be $84,460 per year. The sum of $45,250 deducted from the $74,460 leaves $29,210 as an approximate estimate of receipts over expenditures.

These figures of Col. Waring's are reinforced by an estimate obtained from a different source, furnished to me by parties living in New York. The latter figures referred to increase the receipts from sales of material somewhat, but are substantially the same, showing that on a daily average of 80 tons of garbage the receipts exceeded the expenditures nearly $30,000 per annum. This is for treating the garbage only, and does not include the collecting.

The investigations show that cremating furnaces, with the exception of the Montreal furnace, are used mainly in smaller cities. The proprietors of the furnaces furnishing bids to this city, have each informed me that they prefer to have two or more furnaces located in different parts of the city rather than to have them all in one place, although they say the cremation can be done in one place by two or three furnaces under one roof.

The reports received from the health officers of New York, Philadelphia, Brooklyn and Bridgeport, Conn., where the reduction plants are in operation, and have been for some years, unanimously declare that the operation is not attended by unpleasant odors.

In Philadelphia, a reduction plant (the Arnold), is now handling the garbage coming from a population of more than 700,000 people, and the process is highly recommended by the Mayor of the city, by the Commissioner of Health, by the Director of Public Safety, by a committee of the Common Council, and by a committe of citizens, all of whom state that it is done in a sanitary manner, and without discomfort to the citizens. And it is located within the city limits. It is also recommended by Col. George E. Waring, of New York City, where the same apparatus has been in use for about one year, and was selected by Col. Waring after having examined and tested all other methods which were presented. Col. Waring states in his letter to me that "Under the terms of the contract the cost of disposal, after collection and delivery at the docks, will be about 32 cents per ton."

From all information I have been able to obtain it is apparent that garbage is being reduced at a less sum per ton than is now being charged to the City of Milwaukee

under its contract, also at a lower rate per ton than the prices mentioned in bids now before your honorable body. The Arnold system now in use in New York, Brooklyn and Philadelphia, has been examined by commitees of the Common Council and health officers from Baltimore, Boston and Chicago, and has been recommended for use in those cities as being in every respect sanitary, and more economical than other systems examined by them.

I would therefore respectfully recommend that before a contract is entered into by the City of Milwaukee, that it would be wise to carefully investigate the apparatus so highly recommended by the cities above mentioned, so that the work may be done in a satisfactory manner, and for a considerable less sum per annum than has been paid heretofore.

It would seem to be prudent to thoroughly investigate the apparatus introduced, and which is now in practical operation, before the city shall commit itself to methods more expensive and less satisfactory.

Very respectfully,

WALTER KEMPSTER, M. D.,
Commissioner of Health.

This communication was referred to the Committees on Public Buildings, Grounds and Health.

Attention has heretofore been called to the fact that there was a question in the minds of some as to the date when the contract between the City of Milwaukee and the Wisconsin Rendering Company would expire. The communication from the City Attorney, incorporated in a letter from the Commissioner of Health presented at a meeting of the Common Council held on the 23rd day of November, 1896, held that the contract expired on the 12th day of March, but there were a number of gentlemen who stated in the hearing of the committee that this subject should be investigated, and to cause this to be done the following resolution was introduced:

Resolved, That the City Attorney be, and is hereby instructed to inform the Council at its next regular meeting of the exact date of said expiration of said contract.

An effort was made to hasten the matter of renewal of contract or to make other provisions at this meeting, but the

effort was defeated, and the reports which had been made were laid over until the next meeting on April 12th, 1897, at which time a communication was presented from the City Attorney relating to the date of expiration of contract with the Wisconsin Rendering Company, and is as follows:

OFFICE OF THE CITY ATTORNEY,
MILWAUKEE, April 10th, 1897.

To the Honorable the Common Council:

Gentlemen—Pursuant to the resolution adopted by your honorable body on the 5th day of April, 1897, instructing me to inform the Council at its next regular meeting of the exact date of the expiration of the contract between the City of Milwaukee and the Wisconsin Rendering Company, I have the honor to advise you that on the 1st day of March, I submitted to your honorable body an opinion on the same point, in which I advise you that the contract expired on the 25th day of June next. After a careful consideration of the question, I am still of the same opinion.

Respectfully submitted,
C. H. HAMJLTON,
City Attorney.

At this session a very decided effort was made to hasten the letting of the contract or make provisions for the disposal of the garbage for the time being, or until a new contract should be provided. After much discussion resolutions were adopted as follows:

Resolved, That the Board of Public Works be, and is hereby directed to advertise immediately for proposals and bids for the collection and also the disposition of the garbage, either in the city or outside of the city limits, for the ensuing five years, from the date of expiration of present contract with the Wisconsin Rendering Company; said bids to be accompanied by such bonds as will guarantee the city fulfillment of the contract in case the bids are accepted, and further, to be accompanied by full statement of the parties making such bids of the manner or method to be employed in reducing or disposing of said garbage; and further

Resolved, That the said Board of Public Works advertise in such manner as shall enable bidders to present

separate bids for the performance, respectively, of the work of collection of garbage, of transporting the same, and of reducing, rendering or disposal of the same; and further, to request persons bidding as required aforesaid to present proposition for the turning over to the city any plant or apparatus used in the performance of the contract, at such time and under such conditions as may be agreed upon by the city;

Resolved further, That the bids be submitted to the Common Council for further action.

These resolutions required proposals for the construction of garbage disposal plants either inside or outside of the city, and the Board of Public Works were directed to advertise accordingly.

On the 26th of April, 1897, a communication was received from the company representing the so-called "Arnold Improved Process," which is as follows:

To the Honorable the Common Council of the City of Milwaukee:

Gentlemen—On the 24th inst., under official notices Nos. 15, 16 and 17 of the Board of Public Works of this city, we made three separate bids for the work of collecting, transporting and disposing of the garbage, dead animals, refuse, etc., of the City of Milwaukee, for the term of five years next ensuing.

These bids, while not in literal compliance with the notices, are, as we are advised, in substantial conformity thereto, and in the only practical form for making the same—if there is to be any competition whatever in the bids.

Our bid is qualified as to the matter of time by proposing that the date for entering upon the contract shall be three months from the day of the execution. This is obviously a necessary qualification, unless all bidders are to be excluded from the proposals, except the Wisconsin Rendering Company—which we think cannot be the desire of the Board of Public Works or of this body.

The qualification that the separate bids are conditional upon all being accepted, is of course immaterial to the city, if the aggregate of the three bids made by us is

less than the aggregate of any other bids for doing a like work.

It must be entirely plain to your honorable body that no one can bid in safety on a matter of so much magnitude, without knowing that the other branches of the business will be taken care of; that is to say, no bidder for transportation could afford to be dependent upon the solvency or competency of the party collecting and delivering—nor could the party who contracts to dispose of the material afford to be dependent upon separate contractors for the other branches of the work.

In regard to the third qualification, that the plant be in the city limits, this provision is inserted for the reasons, first, that the work under Arnold's Improved System (the method to be adopted by the undersigned), will not give the slightest offense to anybody and can be carried on in the heart of the city without any annoyance or criticism from adjoining property-owners. And for the reason, second, that the cost for transportation would be much diminished, and the city would get the benefit of the diminution in expense.

The system which the undersigned proposes to use has been adopted in New York, Boston and Philadelphia, and has recently been investigated by the city authorities of Baltimore, Md., and its efficiency and merits recognized by all of said cities.

In regard to the cost of caring for the garbage, etc., under the bid of the undersigned, as compared with other bids, we call your attention to the fact that by our proposal, we agree to absolutely take care of all the garbage, dead animals, etc., of the City of Milwaukee, which is constantly increasing in amount, for the ensuing five years, at a price as low as the other competing bidder, the Wisconsin Rendering Company, who offer to take care and dispose of 25,000 tons only.

We are credibly informed that the present average annual amount of garbage to be disposed of from the City of Milwaukee is fully 30,000 tons, and in our bid we have assumed that this amount will be annually increasing, and it is for this reason that we have made our bid for the latter years higher than for the earliest ones.

You will observe that our total bid for the first year is $15,000 less, for taking care of all of the garbage, etc., than

the bid of the Wisconsin Rendering Company for taking care of but 25,000 tons.

We desire to say in conclusion, that we are prepared in good faith to go ahead and construct a plant to take care of the garbage, etc., for the next five years, and that under our bid the city makes a saving during that period of from $75,000 to $100,000.

Yours very truly,
GUYTON & CO.

At the same meeting a communication was presented from the Wisconsin Rendering Company in which it was proposed to change the sum named in the bid which had been presented by that company to the Common Council on April 24th. The communication is as follows:

To the Honorable the Common Council of the City of Milwaukee:

Gentlemen—In our proposition to do the work for the collecting, transportation and disposal of garbage, submitted on the 24th day of April, 1897, the undersigned Wisconsin Rendering Company, estimated on a basis of twenty-five thousand (25,000) tons per year, being it considered the amount of garbage collected.

In lieu of our proposition submitted to your honorable body on the 24th day of April, 1897, the undersigned Wisconsin Rendering Company will do all the work of collecting, transporting garbage to its plant at Mequon, in Ozaukee County, Wisconsin, and disposing of the garbage at said plant, for the term of five (5) years, at the following figures:

Seventy thousand seven hundred and fifty ($70,750.00) dollars for the first year, and an increase of fifteen hundred dollars ($1,500.00) per year thereafter for the remainder of the five years.

The above proposition we submit leaving it optional with the city to accept in lieu of our proposition of April 24th, 1897.

Respectfully,
WISCONSIN RENDERING CO.,
FRED. C. GROSS, *President.*

After the reading of this communication there was much discussion upon the subject, and a motion was made to refer

the whole subject to a select committee of five, but it did not prevail, and the "matter relative to the disposal of garbage was referred to the Committee on Health with instructions to report at the adjourned meeting, Thursday, April 29."

On the date of this meeting two reports were presented, a majority and a minority report, the majority report accompanied by a resolution, as follows:

To the Honorable the Common Council:

Gentlemen—The majority of your Committee on Health has considered the various bids presented to this Council by the Board of Public Works, received by them in response to advertisements authorized to be made by said Council for proposals for collecting, transporting and disposing of the garbage, and have further considered the proposition addressed to the Common Council by the Wisconsin Rendering Company, and read before this body and referred also to this committee. The result of our inquiry and deliberations are respectfully presented to your honorable body in the subjoined resolution, the adoption of which is respectfully recommended:

Resolved, By the Common Council of the City of Milwaukee, That the proposition submitted to the Common Council by the Wisconsin Rendering Company for the collecting, transporting and disposing of the garbage of the City of Milwaukee for the term of five years for the sum of $70,750.00 for the first year, and an increase of $1,500.00 per year thereafter for the remainder of the five years, be and the same is hereby accepted, and the Board of Public Works is hereby directed to enter into a contract with the said Wisconsin Rendering Company pursuant to the terms of such proposition for doing said work.

The second report is as follows:

To the Honorable the Common Council:

Gentlemen—The minority of your Committee on Health, to whom was referred the question of the disposal of the garbage and bids submitted by the Board of Public Works to the Common Council, on April 26th, beg leave to report that they have carefully considered the whole matter, and find that it is, in their judgment, to the interest of the city to reject all the bids received, and that the board be directed to readvertise for proposals.

We therefore submit the accompanying resolution with the recommendation that the same be adopted.

WHEREAS, on the 24th day of April, 1897, certain proposals for bids for doing the work of collecting, transporting and disposing of the city's garbage were received and opened by the Board of Public Works, and transmitted by said board to the Common Council on the 26th day of April, 1897; and

WHEREAS, It appears to the Common Council that the lowest bid for doing such work is unreasonably high; therefore be it

Resolved, By the Common Council of the City of Milwaukee, That all proposals and bids for doing the work of collecting, transporting and disposing of the garbage of said city, received by the Board of Public Works and submitted to the Common Council on April 26th, 1897, be and the same are hereby rejected; and further

Resolved, That the Board of Public Works be, and it is hereby directed to immediately advertise for proposals or bids for doing the work of collecting, transporting and disposing of the garbage of the City of Milwaukee for the period of five years from the date of the expiration of the present contract for doing such work with the Wisconsin Rendering Company, each proposal or bid to state an aggregate sum per year for doing the entire work of collecting, transporting and disposing of said garbage, and to be accompanied by such bond as will guarantee to the city the execution and fulfillment of the contract in case the proposal or bid is accepted, and by a full statement by the party offering the proposal or bid, of the manner or method in which such garbage is to be disposed of, the right to be reserved to reject any or all proposals or bids offered; and further

Resolved, That all proposals or bids received be forthwith submitted to the Common Council for further action.

Upon these reports there was considerable discussion.

During this session of the Council a communication was read, which had been received from the City Attorney, relating to the formality of the supplemental proposal made by the Wisconsin Rendering Company, and presented to the Council at the session held April 26th. Following is the letter:

OFFICE OF THE CITY ATTORNEY,
MILWAUKEE, April 29th, 1897.

Hon. Wm. H. Starkweather, Alderman Sixteenth Ward:

Dear Sir—You ask for my opinion as to whether or not the Common Council can legally accept the proposition of the Wisconsin Rendering Company to collect, transfer and dispose of the city's garbage, submitted to the Common Council in the form of a communication introduced by Alderman Doelger at the regular meeting held on April 26th, 1897.

It appears that at the regular meeting of the Common Council, held on April 12, 1897, a resolution was adopted directing the Board of Public Works to advertise immediately for bids for the disposition of the garbage. Thereupon, on the next day, the board advertised that such bids would be received at its office until April 24th, 1897, at 10:30 o'clock A. M., and would be submitted to the Common Council for its action upon the same. At the time stated bids were received from several parties, among them one from the Wisconsin Rendering Company, and opened and transmitted by the board to the Council on April 26th. While the several bids were before the Council, and before final action had been taken thereon, the communication first above referred to was introduced by Alderman Doelger. In this communication the Wisconsin Rendering Company states that the proposition therein made is in lieu of the proposition submitted by it on the 24th day of April, 1897. It is in effect, therefore, a new bid. Whether it is considered a new bid or an amendment of the old bid, would not, however, in my judgment, be material in determining the question submitted to me.

Section 16 of Chapter V of the charter provides that all city work, when the cost thereof shall exceed $200, shall be let by contract to the lowest bidder in the manner provided by Sections 10, 11 and 13 of the same chapter. The contract is to be let after due notice inviting proposals in the manner provided for the letting of contracts for the doing of public work as provided in Section 9 of Chapter V. After the expiration of the time limited by the notice within which proposals are to be submitted, none can be received, nor can those already submitted be amended. To hold otherwise would be to nullify the intent of the sections of the charter above referred to.

These sections were introduced to encourage and regulate competition among bidders for public work. If bids can be once amended, they can be indefinitely amended If a new bid can be submitted at any time, it can be more than once. If a bid can be amended by a proposition to do the work for a lower price, it can be amended by a proposition for a higher. It can easily be seen that a construction of this section of the charter which would permit these things to be done would lead to great confusion and would discourage honest bidders from bidding. Favoritism in any degree, however slight, is directly opposed to the principle underlying the award of public contracts. It has been decided that the lowest bidder cannot be allowed to withdraw his bid and the contract then be awarded to the next bidder. Under the same principle one bidder cannot be permitted to amend his bid after the bids are opened, and so gain an advantage over another.

For these reasons I am of the opinion and have to advise you that the proposition of the Wisconsin Rendering Company, submitted to the Common Council in a communication introduced by Alderman Doelger, cannot be considered in determining the award of the contract for collecting and disposing of the city's garbage.

Yours truly,

HOWARD VAN WYCK,
Assistant City Attorney.

At the request of some members of the committee appointed to investigate this subject, a communication was prepared by the Commissioner of Health, and presented, which is as follows:

OFFICE OF THE COMMISSIONER OF HEALTH,
MILWAUKEE, WIS., April 26th, 1897.

To the Honorable the Common Council of the City of Milwaukee:

Gentlemen—At the request of several members of your honorable body, I herewith present for your consideration a statement concerning the bids for collection, transportation and disposal of the garbage of the City of Milwaukee, now before you for consideration. The statement is substantially the same as that which was presented to your Committee on Health, but as it contains

some statistical matter, I was requested to present it in a permanent form.

For the purpose of determining the cost of the disposal of garbage for the succeeding five years, it was assumed that your honorable body intended that the work of collecting, transporting and disposing should be let to the same party, avoiding a multiplicity of contracts, and upon this assumption only those bids were considered by the Commissioner of Health which proposed to do all the work connected with the removal and disposal of garbage. Acting upon this assumption, there were to be only two bids to be thus considered; 1st, that of the Wisconsin Rendering Company, and 2nd, that of Guyton & Co.

The bid of the Wisconsin Rendering Company is as follows:

For collection.....	$6\frac{1}{2}$	cents per 100 lbs.
For transportation.....	$1\frac{3}{4}$	" " " "
For disposal.....	$5\frac{3}{4}$	" " " "
This is a total of.....	14	" " " "

or $2.80 per ton up to 25,000 tons per annum. Twenty-five thousand tons treated at $2.80 per ton would amount to $70,000.00. Should the total amount of garbage exceed 25,000 tons per annum, then all the garbage in excess of 25,000 tons per annum is to be collected and disposed of at the rate of $11\frac{1}{4}$ cents per 100 pounds, or $2.25 per ton.

The total tons of garbage collected in 1895 was 26,994, or 1,994 tons in excess of the 25,000, which, if treated at the excess rate of $2.25 per ton, would amount to $4,486.50.

The total number of tons collected in 1896 was 30,315, being 5,513 tons in excess of the 25,000 rate, which, being treated at the excess rate of $2.25 per ton, would amount to $12,403.25, which, being added to the $70,000.00, would be a grand total, according to this bid, of $82,403.25.

Now, was this amount of garbage collected? The books show that the total amount of garbage collected per year since 1892 was as follows:

For 1892.....	20,498 tons.
" 1893.....	20,863 "
" 1894.....	20,760 "
" 1895.....	28,793 "
" 1896.....	30,513 "

There was no systematic method adopted of keeping correct figures until 1895, since that time the method has been more systematic.

During this period the average annual increase in population has been about 9,000, and as the city increases in size the average annual increase is larger. The increase in 1896 over 1895 being slightly over 10,000.

It is fair to assume, therefore, that the average annual increase will exceed rather than fall short of 10,000 per year, for the next five years. And the quantity of garbage will increase in proportion. It is also fair to assume that the increase in the quantity of garbage collected for the next five years will bear about the same proportion of increase as the last five years has done, and we may assume, therefore, the garbage will increase about as follows:

1897, 32,353 tons; excess over 25,000 of 7,253 tons, which at the rate of $2.25 per ton would be	$16,319.25
1898, 33,993 tons; excess rate 8,993 tons	20,234.25
1899, 35,733 tons; excess rate 10,733 tons	24,148.65
1900, 37,473 tons; excess rate 12,473 tons	28,061.25
1901, 39,213 tons; excess rate 14,213 tons	31,979.25
A total excess rate of	$120,745.00

Or to put it as it would be annually:

For 1897, 25,000	$70,000	$16,319	$86,319
For 1898, 25,000	70,000	20,234	90,234
For 1899, 25,000	70,000	24,149	94,149
For 1900, 25,000	70,000	28,064	98,064
For 1901, 25,000	70,000	31,979	101,979
Grand total		$120,745	$470,745

Bid of Guyton & Co.:

For collection.

1897	$25,000.00
1898	27,500.00
1899	30,000.00
1900	32,500.00
1901	35,000.00

An average of $30,000.00 a year.

For transportation.

1897	$10,000.00
1898	12,500.00
1899	15,000.00
1900	17,500.00
1901	20,000.00

An average of $15,000.00 per year.

For disposal.

1897	$20,000.00
1898	22,500.00
1899	25,000,00
1900	27,500.00
1901	30,000.00

An average of $25,000.00 per year.

A total of $70,000.00 per year for five years.

Total cost for five years (Wisconsin Rendering Company)	$470,745.00
Total cost for five years (Arnold Co.)	350,000.00
Excess of Wisconsin Rendering Co.'s bid over the Guyton Co.'s bid for the five years of	$120,745.00
An average annual excess of	24,149.00

The present rate paid (this year) for the collection, transportation and disposal of garbage, assuming that 30,513 tons are collected, is $2.49 per ton. If but 25,000 tons are collected as claimed, then the company received $3.04 per ton for collection, transportation and treatment. If there is only 25,000 tons collected annually, and the Wisconsin Rendering Company is satisfied with the same rate per ton now paid under our figures of 30,513—that is $2.49 per ton for treatment—then, assuming there are only 25,000 collected, the total amount per annum would be $62,250.00, instead of $76,000.00, or $13,750.00 less than is now paid.

Assuming that the supplemental bid made by the Wisconsin Rendering Company is accepted, their figures are still the highest. The supplemental bid of the Wisconsin Rendering Company proposes to collect, transport and dispose of the garbage of the city for the first year of the contract for the sum of $70,750.00, with an additional $1,500.00 for each succeding year, making:

A total of the second year's cost	$72,250.00
Of the third year's cost	73,750.00
Of the fourth year's cost	75,250.00
Of the fifth year's cost	76,750.00

So that the average excess in cost of the supplemental bid of the Wisconsin Rendering Company is in the aggregate $18,750.00 more than the bid of the Arnold Company.

If the Arnold Company should erect a plant within the limits of the City of Milwaukee, it is reasonable to assume that the item for transportation contained in their present bid, averaging $15,000 per year, would be materially modified, if not altogether eliminated, because if the plant was located in the city limits the garbage could be drawn directly to the works without being dumped upon a scow and then unloaded at the other end, a double handling, which would not be necessary if the plant was located within the city limits, but, under the recent advertisements for proposals, I am informed that the company felt compelled to present a bid covering the item of transportation in order to be within the requirements contained in the advertisement.

Very respectfully,

WALTER KEMPSTER, M. D.,
Commissioner of Health.

There was considerable discussion upon the majority and minority reports, and efforts were made to substitute one for the other, but a motion was made to adjourn, which prevailed, and thus the whole subject was delayed still further.

On the 30th of April the Common Council again met for the purpose of considering the garbage disposal question, and another communication was sent in from the Wisconsin Rendering Company, as follows:

To the Common Council of the City of Milwaukee:

Gentlemen—When the Board of Public Works recently readvertised for bids, the undersigned, the Wisconsin Rendering Co., submitted the only bid received in compliance with published advertisements. The bid submitted was a reduction of our former bid, as we anticipated competition; and having our plant built and completed were desirous of obtaining the contract. We since submitted a supplemental proposition, being, as we

considered, substantially the same in amount and result as that submitted to the Board of Public Works. The City Attorney having rendered an opinion that the subsequent proposition could not be accepted, and it being evident that the Council desires the contract let in the aggregate, we hope the members of the Common Council will at once proceed to readvertise for bids for doing this work in the aggregate. We will then submit the same figures now contained in our supplemental proposition, and should the Council see fit to accept the bid of some other competitor, in the interest of the city, we shall then be satisfied, as the figures now given your honorable body are the lowest for what we can do the work properly.

WISCONSIN RENDERING COMPANY.

There was much debate upon the foregoing communications and the following resolutions were adopted:

WHEREAS, On the 24th day of April, 1897, certain proposals or bids for doing the work of collecting, transporting and disposing of the city's garbage were received and opened by the Board of Public Works, and transmitted by said board to the Common Council on the 26th day of April, 1897; and,

WHEREAS, It appears to the Common Council that the lowest bid for doing such work is unreasonably high; therefore, be it

Resolved, By the Common Council of the City of Milwaukee, That all proposals and bids for doing the work of collecting, transporting and disposing of the garbage of said city received by the Board of Public Works and transmitted to the Common Council on April 26th, 1897, be, and the same is hereby rejected; and further

Resolved, That the Board of Public Works be, and is hereby directed to immediately advertise for proposals or bids for doing the work of collecting, transporting and disposing of the garbage and dead animals of the City of Milwaukee for the period of five years from the date of expiration of the present contract for doing such work with the Wisconsin Rendering Company, each proposal or bid to state an aggregate sum per year for doing the entire work of collecting, transporting and disposing of said garbage and dead animals, and to be accompanied by such bond as will guarantee to the city the execution and ful-

fillment of the contract, and that within ninety (90) days from the execution of the contract, the work shall be in successful operation in case the proposal or bid is accepted, and by a full statement by the party offering the proposal or bid of the manner or method in which garbage and dead animals are to be disposed of, the several bidders to state in their bids whether the reduction plant will be located within or outside of the city limits, and that the Assistant City Attorney be instructed to assist the Board of Public Works in drawing up the form of said advertisement, the right to be reserved to reject any or all proposals or bids offered; and further

Resolved, That all proposals or bids received be forthwith submitted to the Common Council for further action.

The near approach of the termination of the contract for collecting and disposing of garbage made it imperative that some action should be taken forthwith, and in an endeavor to secure such action the Mayor sent the following communication to the meeting of the Common Council, held on the 3rd day of May, 1897.

MAYOR'S OFFICE,

MILWAUKEE, May 3rd, 1897.

To the Honorable the Common Council:

Gentlemen—A matter of grave public interest leads me to express to your honorable body to-day my earnest hope that your endeavors to secure a wise solution of the question of garbage disposal will be successful. The problem is beset with difficulties; some of them are unexpected, and therefore require prompt and vigorous efforts on your part. The failure of your efforts in the Legislature to secure a passage of a law authorizing the city to acquire land and dispose of garbage beyond the city limits, is regretted, and disappointment is increased when we remember that the same privilege was conferred upon private parties, but refused to a municipality contributing seventy or eighty thousand dollars annually for the disposal of garbage. The bids last received for the performance of this public service certainly show what amount might have been saved to our taxpayers had your recommendations on this, as well as on other matters, not been ignored, to satisfy the ambition of private enter-

prises. Such a law would have opened up the whole business of garbage disposal to a large number of competent bidders, and the perplexing questions since appearing to baffle you would not have been raised. Without, however, indulging in regrets that the welfare of our public was sacrificed during the last session of the Legislature in this particular, I take this occasion to state that you have acted wisely in rejecting all bids so far presented and in ordering readvertisement for the work. Your action shows plainly that you are in earnest in your efforts to secure to the city the advantages of economy and also the most sanitary and efficient settlement of this matter of disposing of garbage under the present unfavorable circumstances.

I hope that you will use all honorable means to secure a legal and advantageous competition in your further action upon the question, and thereby, if possible, save in a five-year contract the sum of eighty or one hundred thousand dollars. I have great confidence that a successful solution of the problem will be made by your careful and vigorous attention, and that you will thus secure a victory for economy and good government.

Respectfully submitted,

W. G. RAUSCHENBERGER,

Mayor.

In order to facilitate means by which the garbage could be disposed of in a suitable plant within the city limits, a certain ordinance regulating the disposal of garbage and dead animals, etc., within the city, was amended, so that when amended it read as follows:

AN ORDINANCE to amend Section 20 of Chapter XV. of an ordinance entitled "An ordinance to revise, consolidate and amend the general ordinances of the City of Milwaukee," passed June 8th, 1896.

The Mayor and Common Council of the City of Milwaukee do ordain as follows:

Section 1. Section 20 of Chapter XV. of an ordinance entitled "An ordinance to revise, consolidate and amend the general ordinances of the City of Milwaukee," passed June 8th, 1896, is hereby amended by inserting after the word "Milwaukee" at the end of the first clause in said section the words: "Provided, however, that garbage, animal

matter and the carcasses of animals may be reduced, consumed, rendered or tried out within the City of Milwaukee by any process which effectually prevents the escape of offensive odors therefrom, and creates no nuisance, nor is in any way deleterious to the public health; such process before being operated to be approved by the Commissioner of Health, and to be at all times subject to his supervision," and by adding at the end of said section the words: "And each day during which such violation shall continue shall be deemed to be a separate offense," so that such section when so amended shall read as follows:

Section 20. Every person owning, operating or having the charge, care or custody of any packing house, slaughtering establishment or butcher shop within the City of Milwaukee, authorized or permitted by this chapter, shall cause the same to be provided with a tight, caulked, plank or asphalt floor. Such floors shall be so constructed as to carry off into a tub or reservoir to be provided for that purpose, all blood or offal; and all such packing or slaughtering houses and butcher shops shall be kept at all times in a thoroughly cleanly and healthy condition, and no nuisance permitted to remain on the premises. All packing and slaughtering houses and butcher shops shall be connected with the sewer system of the city. All packing and slaughtering houses and butcher shops in which any rendering or trying out of any animal matter is done, shall be provided with such condensers and other appliances as shall be approved by the Commissioner of Health, and no undressed hogs, cattle or other animal, or any diseased, decayed, purtid or unsound animal matter of any kind, shall be rendered or tried out in such packing houses, slaughtering establishments or butcher shop, or in any other establishment or place within the City of Milwaukee; provided, however, that the garbage, animal matter and the carcasses of animals may be reduced, consumed, rendered or tried out within the City of Milwaukee by any process which effectually prevents the escape of odors therefrom, and creates no nuisance nor in any way deletrious to the public health; such process before being operated, to be approved by the Commissioner of Health, and to be at all times subject to his supervision.

Each and every person or corporation who shall violate or fail to comply with the provisions of this section shall be punished by a fine of not less than one hundred dollars, nor more than three hundred dollars, for each and every

offense; and each day during which such violation shall continue shall be deemed to be a separate offense.

Section 2. This ordinance shall take effect and be in force from and after its passage and publication.

This ordinance was passed by the Common Council at a special meeting held on the 5th day of May, 1897.

Under the authorization of the Common Council the Board of Public Works advertised the third time for proposals on the 10th day of May, 1897, for the construction of reduction works, and for the collection, transportation, etc., of garbage and dead animals. That the contractors who made proposals might be thoroughly advised of the work to be done and the methods to be employed by them in accomplishing the work, specifications were prepared which should govern them in making their bids. The following is a copy of the specifications:

SPECIFICATIONS

For the Collection of Garbage, Offal, Slops, Dead Animals and Animal and Vegetable Matter Within the Limits of the City of Milwaukee and for the Disposal of the Same.

The work to be done under these specifications will consist of furnishing all material and doing all the work necessary and requisite for the complete, thorough and sanitary collection, removal and final disposal of all garbage, slops, offal, dead animals, animal and vegetable matter from every residence, hotel, flat, boarding house, tenement house, restaurant, hospital, butcher shop, fish market, market place, commission house, or building of any kind, within the limits of the City of Milwaukee, wherever said material may be found, for a period of five (5) years from and after ninety (90) days after the date of execution of the contract.

The garbage and other material as above specified is to be collected in an inoffensive manner and without creating any nuisance by spilling any of said garbage upon the premises or in the streets, or either of them, or while in transit to the garbage plant, wherever the same may be

located, but shall be collected and conveyed from the premises and deposited in iron or steel tanks or wagon boxes provided with lids constructed in such a manner that when such lids are closed there will be no escape of odors nor spilling or slopping over of any of its contents. The garbage wagons must be approved by the Commissioner of Health.

Between the first day of May and the last day of October in each year said garbage shall be collected from every house, as above specified, within the limits of the City of Milwaukee at least three times in each and every week; from hotels, boarding houses, etc., at least once each day, and as much oftener as the Commissioner of Health shall think proper. From the first day of November to the first day of May in each year the said garbage shall be collected at least twice in each and every week, except from the hotels and boarding houses, from which places it must be collected once each day, and as much oftener as the Commissioner of Health shall direct. And the contractor will be required to remove immediately any garbage, etc., which may have been overlooked or omitted by the collector.

Dead animals shall be removed at any time, either day or night, when notice is given to the contractor that there is a dead animal upon any street or premises or place of business located within the limits of the City of Milwaukee. Such animals are to be removed in a covered wagon, which must be kept specially for such purposes, ready at all times to respond to a call for the removal of such dead animals. Said contractor will be required to maintain at least two wagons constructed for the purpose of collecting and removing garbage at the disposal and under the control of the Commissioner of Health, whenever requested by him to do so, for the collection of such garbage as he may deem necessary.

The collections of garbage shall be made between the hours of 5 A. M. and 6 P. M., unless otherwise directed by the Commissioner of Health.

All garbage wagons, when emptied of their contents, must be thoroughly washed out at least once a day, and, if necessary, disinfected, so that there shall be no offensive odor about the wagons.

The contractor will be held responsible for the proper handling of the garbage receptacles and for any damage to such receptacles by any of the men in his employ.

The work of collecting and disposing of the garbage will be constantly subjected to the inspection, supervision and approval of the Commissioner of Health of the City of Milwaukee, or such person as he shall appoint for that purpose.

The bills for collecting and disposing of the garbage will be paid for in monthly installments upon certificates to be issued by said Commissioner.

The method of disposing of all garbage, offal, slops, dead animals and animal and vegetable matter, may be by conversion or destruction, but in such manner as shall be inoffensive, and without creating noxious or disagreeable odors of any kind, either in form of vapors, gas, steam or water, which will extend beyond the limits of the lot on which said plant is erected, and any water flowing from the disposal plant must be without offense or obnoxious odor, and free from color or any element of danger to the public health, and, if found necessary, said water must be filtered or otherwise freed from such danger in such manner as may be required by the Commissioner of Health.

Said plant or plants must be fully capable at all times of disposing during each and every twenty-four (24) hours of all garbage, dead animals, etc., collected within such time.

The maximum quantity of garbage collected during any day in the year 1896 amounted to about ninety (90) tons. The total number of loads collected during the year 1896 was 38,142, and the average weight of each load was about 1,600 pounds, the average daily collection being about eighty-three (83) tons. The total number of large dead animals collected was 460. The total number of small dead animals collected was 16,115.

The plant for the disposal of garbage must be complete in every respect, and consist of all necessary machinery, boilers, apparatus, and all other necessary appurtenances on permanent foundations, and in buildings neatly constructed, of ample capacity, suitably arranged to meet the requirements, subject to the approval of the Board of Public Works and the Commissioner of Health.

Collections of garbage, dead animals, etc., at the plant, must not be stored or unloaded outside the buildings erected for the disposal of the same, but must at all times be unloaded upon suitable floors or receptacles within the building, and kept there in an inoffensive condition until finally disposed of within the apparatus used for this purpose

The contractor will be required to maintain telephone communication with the Health Department and must respond promptly to all demands made for removal of either dead animals or garbage.

The site selected by the contractor for the erection of the disposal plant, if within the city limits, must be approved by the Commissioner of Health, and any site not so approved cannot be used for such purposes.

Bidders will submit with their proposals a statement sufficient to fully and distinctly show and describe the proposed method of disposing of the garbage and dead animals as above required, and of its ability to do the required work, together with such plans or drawings of the buildings as shall convey a clear idea of the proposed methods.

Bidders will also state where the proposed method of collection and disposal is now in practical operation, and for how long a time it has been used in doing its work in a practicable and suitable manner.

No bid will be considered by the Board of Public Works which does not contain a statement showing the length of time and the places wherein the proposed apparatus has been in successful operation.

Bidders are required to submit with their bids a proposition for disposing to the City of Milwaukee of all horses, harnesses, wagons and other apparatus and appurtenances used for the collection and delivery of the garbage, and of any and all plants, apparatus and appurtenances used in the final disposition of the garbage, at such time and upon such terms and conditions as may be agreed upon after the expiration of the contract, and the city hereby reserves the right to purchase said wagons, horses, harnesses, plant or plants, or any part thereof as specified above, at a price to be fixed by arbitration, and in case of arbitration the city will appoint one arbitrator, the contractor one, and these two will appoint a third, and the decision and award of the three arbitrators so appointed shall be binding and conclusive on the parties concerned in the contract. The arbitrators in determining the value of the plant are, however, not to take into consideration the earning capacity of the same.

For each verified failure or neglect to collect the garbage, slops, offal, dead animals and animal and vegetable matter, in a proper sanitary manner, as above

mentioned, the sum of one dollar ($1.00) shall be deducted from the moneys owing, or becoming due to the contractor, for each and every individual instance of neglect or refusal to properly collect the same, and said sum shall be deducted from the monthly certificates of payment before said certificates are audited or issued by the Commissioner of Health.

The Contractor will be required to maintain strict discipline, good order and decorum among his collectors while they are at work, and will be required to permanently dismiss from his employment any collector who shall be found to be incompetent, disorderly or intemperate, and such collector shall not again be employed upon the work of collection.

The successful bidder will be required to begin the collecting and disposal of garbage according to these specifications within ninety days after the execution of the contract, and the first payment made under its provision shall be thirty days after the collection and disposal of the garbage, dead animals, etc., shall have been performed to the satisfaction of the Mayor and Commissioner of Health of the City of Milwaukee.

Any additional information relating to the above mentioned work will be promptly furnished upon application to the Commissioner of Health.

The contractor must agree to indemnify and save harmless the City of Milwaukee from all loss, costs or damages, that said city may incur on account of the collection and disposal of said slops, offal, garbage, dead animals, and animal and vegetable matter, and also to save said city harmless from all loss, costs or damages arising from the use of machinery or apparatus, or methods of disposal of any kind, upon which there may be patents.

The contractor will be required to observe and comply with the provisions of all ordinances of the City of Milwaukee relating to the public health.

Approved May 10, 1897.

WALTER KEMPSTER, M. D.,
Commissioner of Health.
G. H. BENZENBERG,
FRED. SCHNEIDER,
PAUL MUENZBERG,
S. J. BROCKMAN,
Commissioners of Public Works.

On the 24th day of May following the bids were submitted to the Common Council by the Board of Public Works, with the following communication:

OFFICE OF THE BOARD OF PUBLIC WORKS,
MILWAUKEE, May 24, 1897.

To the Honorable the Common Council:

Gentlemen—We herewith transmit to your honorable body the several bids received by this Board on May 22, 1897, for the collection and disposal of the garbage (and dead animals) of the City of Milwaukee for the ensuing five years.

The bids were submitted by:

1. Wm. Forrestal, with plans and specifications.
2. T. R. Wiesemann, with plans and specifications.
3. Crilley & O'Donnell, with plans and specifications.
4. Wisconsin Rendering Co., with plans and specifications.
5. Arthur Froemming Co., with plans and specifications.
6. Cooper & Burke, with plans and photos.

The bids aggregate as follows:

BIDDERS.	For Disposal Outside of City.	For Disposal Inside of City.
Wm. Forrestal, Holthaus	$323,500 00	$285,350 00
Crilley & O'Donnell, Holthaus	324,500 00	274,500 00
Arthur Froemming Co., Holthaus	355,000 00	335,000 00
T. R. Wisemann, Detroit	390,000 00	340,000 00
Wisconsin Renderiug Co., Merz	368,750 00	.....
Cooper & Burke, Arnold	300,000 00	300,000 00

These bids were referred to a joint committee consisting of the Committee on Health and Judiciary, and meetings were held by them for the purpose of attempting to reach a conclusion as to the best bid, but no conclusion was reached at the time, and on the 29th day of May, 1897, a special meeting of the Common Council was called, which call read as follows:

Dear Sir—You are respectfully requested to attend a special meeting of the Common Council, to be held in the council chamber on Saturday next, the 29th day of May, at 2:30 P. M., for the purpose of receiving and acting upon a report of the Committees on Health and Judiciary with reference to the desirability of appointing a committee to visit various garbage disposal plants; to permit the introduction of a resolution appropriating a sufficient sum of money to defray the expenses of such a trip, if it is deemed advisable that such committee be appointed, and to receive communications from city offices.

At this meeting the following communication was presented, and also the resolution accompanying it:

To the Honorable the Common Council:

Gentlemen—Your joint Committee on Health and Judiciary have given careful consideration to the bids submitted to this body by the Board of Public Works at the last meeting, containing propositions for the disposal of the city's garbage as per advertisements and previous directions of this board.

The committee has held three sessions and carefully examined the plans and bids in connection with the specifications prepared for the work proposed. The several contractors, with their representatives or patentees, have explained in the hearing of the committee the advantages of their respective systems of disposal, and the committee has made careful memoranda of all testimony presented in support of the merits of each particular system.

The committee, however, is confirmed in the belief that an actual inspection or investigation of the several competing systems by competent persons is demanded in the interest of the city, and can hardly be dispensed with, in a satisfactory solution of the question.

Representatives of the several bids offered claim that their works are in actual operation; that they are open to inspection, and that the efficacy of the methods used can best be determined by practical examination of the works.

In view of these circumstances, we deem it advisable that this Board should commission a number of capable and reliable men, who are known in every respect to be

non-committal, and who have not expressed preference for any special system, to go to the several places where the systems of garbage disposal proposed in the several bids are in operation, and that before any definite action is taken in regard to letting the contract the report of such committee of gentlemen be presented to your honorable body. To accomplish this purpose we offer the following resolution with the recommendation that the same be adopted:

Resolved, That the President of the Common Council appoint a committee of — members of this board, together with the Commissioner of Health and the City Engineer, who shall visit the several places where systems of garbage disposal proposed in the several bids submitted to this body are in actual operation; and further

Resolved, That the said committee be, and is hereby instructed to make report of their investigation to the Common Council as soon after their return as practicable.

Alderman Okershauser moved that the blank space in the foregoing resolution be filled by the word "three."

The motion prevailed and the chair ordered the clerk to fill the blank by the word "three."

The chair appointed as such committee, Aldermen Stevens, Renning and Schrank.

At the same meeting the Commissioner of Health presented a communication relating to the expediency of proper consideration and examination of the whole subject, which is herewith presented.

OFFICE OF THE COMMISSIONER OF HEALTH,
MILWAUKEE, May 29, 1897.

To the Honorable the Common Council of the City of Milwaukee:

Gentlemen—On Thursday evening last I had the honor to make some suggestions to your joint Committee on Judiciary and Health, at their request, concerning the importance of making a careful, systematic examination of the several garbage plants in operation before a selection is made for the city.

The subsequent action of the committee leads me to the conclusion that the suggestions I then made were not understood.

The importance of the subject now before your honorable body cannot be overestimated, as it concerns the health or comfort of every person in the city, not only for one day, but for five years.

The suggestions made to your committee were, that a competent master mechanic, or mechanical engineer, should accompany such commission as you may select to make these examinations; a man whose daily business fits him for practical investigation into all details; whose familiarity with such matters makes him competent to conduct such investigations, and that this should be done immediately.

The zeal with which any particular plant or patent is presented by any person should not determine its acceptance by the city; each method presented should be carefully examined for such merits or demerits as may exist; and the perfectness of the apparatus to do the work required, in a proper sanitary manner, should govern the selection regardless of the name of the plant, or by whom it is patented or manufactured.

When your honorable body shall be thus advised you will be able to form an intelligent conclusion upon this important matter.

Very respectfully,
WALTER KEMPSTER, M. D.,
Commissioner of Health.

The committee above named left immediately to examine the garbage reduction plants indicated, and on the 21st day of June the report of that committee was presented to the Common Council.

As the report embodies the points specially looked into it is a matter of some importance, and as we have frequent calls for a copy of document, it is herewith presented in full:

MILWAUKEE, June 21, 1897.

To the Honorable the Common Council, City:

Gentlemen—Under the authority of the following resolution, which was adopted by the Common Council at a special meeting on May 29, 1897, viz.:

"*Resolved*, That the President of the Common Council appoint a committee of three members of this Board, together with the Commissioner of Health and the City Engineer, who shall visit the several places where systems of garbage disposal proposed in the several bids submitted to this body are in actual operation.

"*Resolved* further, That said committee be, and is hereby instructed to make a report of their investigation to the Common Council as soon after their return as practicable," the undersigned were appointed to act as such committee.

In compliance with said resolution, your committee visited the several cities as suggested and found that the garbage was being disposed of by different methods under the two general systems of reduction and cremation, and in this report will attempt to clearly present to you the conditions as we found them in each city visited as regards the collection and disposition of the garbage. At most of these cities we communicated directly with the city officials, so that in almost all instances the plants were visited before any previous notification to the contractors or the Superintendent in charge of the works had been given.

All necessary facilities were afforded your committee to obtain the desired information, which was courteously furnished by all parties alike, and for which we herewith wish to express our grateful appreciation.

At Detroit, the first city visited, the garbage is being collected and disposed of by the Detroit Liquid Separating Company, under a contract with the city, for which the city pays the sum of $50,000.

At the present time the amount of garbage so collected and disposed of amounts to about seventy tons per day, which, we are informed, rapidly increases during the summer season to over ninety tons per day. The garbage is being collected either daily or twice or three times a week, according to the districts, in close, water-tight, iron boxes, similar in form to those used here, each having about 1½ tons capacity. These boxes, when full, are delivered at the stables and sheds of the company, located in the southwestern part of the city, near the railway tracks. Here each load is weighed, after which, by means of a traveling crane, the boxes are raised from the wagon trucks and transferred onto flat cars, constructed to

receive these boxes in two tiers of ten in each tier. On the average three such cars are loaded each day (excepting Sundays); are switched out by the railway company during the night and delivered next morning at the disposal plant, about twenty-two miles distant from the city.

The boxes being kept closed and the garbage being left undisturbed therein, no offensive odor was noticeable at the shed where the boxes were transferred from the wagons to the flat cars and were allowed to remain until night. As each wagon is relieved of its box, an empty box, previously washed, is placed upon the trucks and the same is ready to be sent out upon its trip of collection. The company owns all wagons, boxes, cars and horses.

At the disposal plant, situated at French's landing, where the Wabash railroad crosses Huron river, the boxes are lifted from the flat cars and conveyed by a traveling crane to the top floor of the works, where the garbage is dumped onto the floor and then shoveled by hand into the top of steel digesters, or cooking tanks, until these are filled.

There are nine of these tanks, each of about five tons capacity. These digesters consist of vertical, circular iron tanks, with an opening at the top to receive the garbage, which opening, when the digester is filled, is securely closed by an iron plate firmly screw-bolted down to the tank. The bottom of the tank is somewhat cone-shaped, a short distance above which a discharge opening is provided through the side of the tank. Below this opening and extending across the tank, is a perforated false bottom. Within the tank and resting upon this false bottom are three separate cylinders, having double walls, closed on top, open at the bottom and perforated at the sides. The larger cylinder is very nearly the diameter of the tank. The next one is somewhat smaller than this one and is situated inside of it, and the last is still smaller, situated inside of the second cylinder.

After the tank has been filled and closed, steam is turned into the tank and the garbage cooked for a period of six hours, thoroughly digesting the same. During the cooking process, steam and gases are allowed to escape through a pipe from the top of the tank, and are condensed by means of cold water, sprayed in a pipe and conveyed thence into a barrel, from whence both water and condensed steam are drained into the river. This water is fairly clear, possessing a peculiar lemon oil smell.

After the cooking process is completed, steam at a pressure of eighty pounds per square inch is forced into the tank from above and also from below. The liquid from the garbage is then forced out by means of the steam through a pipe under the perforated bottom. The steam pressure is continued on the tank for a period of four or five hours, during which time nearly all the liquid and grease is squeezed out of the material, leaving about 30 per cent. of the original garbage in weight in the tank. This material, called tankage, is withdrawn through the side opening onto the floor and is conveyed by wheelbarrows to an upper floor, where it is shoveled into steam jacketed dryers, in which the material is further dryed for about 2½ hours, leaving about 15 per cent. of the original bulk in a dry homogeneous and brown looking mass. From these dryers the material is taken to the mills, ground up, screened and then stored in the sheds as a fertilizing material. The material drawn from the digesters, after having been pressed, has a slightly sweetish, though inoffensive, smell, similar to the steam vapors in a kitchen. The pressed out water and grease is separated by means of separating boxes, the grease collected in a barrel and the water runs off as a dark brown effluent into the Huron river. This effluent rapidly colors the water in the river and, though it may not be objectionable on sanitary ground, yet is highly objectionable because of its color.

The special features to be recommended at Detroit are the methods of collecting and transporting the garbage to the works, without breaking bulk, and the pressing out of the liquids in the digesters, by means of steam at boiler pressure.

At Buffalo the garbage is being collected and disposed of under a contract with the city, by the Baynes Garbage Works.

The garbage is collected either daily or every other day in open, water-tight, iron dumping carts and delivered directly at the garbage disposal plant, located a short distance outside of the city. The contractor receives from $1.20 to $2.20 per ton for collecting and delivering the garbage at the works. The average collection is about ninety tons per day. During the month of May the average collection was twenty-one loads per day, each load averaging about four tons. The garbage is disinfected in the wagon during collection from a tank on the wagon

whenever necessary. No dead animals are collected by the contractor or delivered to the garbage works. They are collected daily by the city and delivered to a rendering works located not far distant from the garbage plant.

The contractor receives $35,000 a year from the city for the disposal of all garbage, irrespective of quantity.

The carts reaching the works are run up an incline and backed up to a large steel "V" shaped trough, into which the garbage is dumped by tipping the carts to the rear. From this trough the garbage is raked into small tank cars, which are run onto an elevator and raised to the top floor of the plant, where the garbage is dumped through hoppers, into the digesters. These digesters, fourteen in number, are similar in exterior form to those at the Detroit works, but are seven feet in diameter, ten feet in depth, and have a capacity of about ten tons.

After the digesters are filled and closed, the steam is started through a number of perforated pipes leading downward from the top of the digesters through the garbage. The material is subjected to a steam pressure of about forty-seven pounds, which drives the grease, water and gases downward and out, through a pipe leading from the bottom to an accumulating tank. This steam pressure is maintained for a period of about six hours, after which the material is taken out of the digester through an opening in the side near the bottom, falling to the floor. This material, which has been reduced about 50 per cent. in bulk, contains no offensive odors and is simply steam wet. In this form it is built in layers about four feet square and three to four inches thick and subjected to pressure in a Boomer and Boshert steam press, which squeezes out most of the remaining moisture and grease, which falls to the bottom of the press, and from there flows into a receiving tank, from which it is pumped into the accumulating tank. The material, after having been pressed, is dropped into a revolving dryer, where it is thoroughly dried and then removed to the mill, screened and stored in the warehouse as a fertilizing material.

The oil and grease from the accumulating tank is drawn off through an opening near the top. The water, which escaped through a pipe in the bottom of the accumulating tank, is run to an evaporator, from which the steam or vapor is led into a surface condenser, from which the water is discharged as a clear, odorless and almost tasteless effluent.

The residue in the evaporating tank is drawn off by a pump and discharged into a tank, from which it is again sent to the dryer. The vapors from the dryer and from the accumulating tank are conducted by pipes into condensers and from thence to the boiler furnaces.

In order to facilitate the discharge of the liquids, grease and gases from the digesters into the accumulating tank, the pressure on the latter is maintained at about nine pounds less than upon the digesters, the pressure in the accumulating tank being sufficient when the valves are open to force out the grease into a grease tank or the water into the evaporators.

This system is called the Improved Merz System.

There are no offensive odors in or about the plant, excepting that due to the steamed garbage or the finished product, called "Tankage."

The commendable features of this plant, over and above the old Merz system, consist of steaming all the liquids and grease out of the garbage, in a digester before the same is placed in a dryer, and also in the evaporating of all effluent waters and the condensation of vapors by means of a surface condenser into a colorless and odorless effluent.

An objectionable feature is the withdrawing of the steamed garbage and compressing the same in the open air.

At Bridgeport the garbage is collected and disposed of under a contract with the city, by the "Connecticut Reduction Co." The garbage is collected in barrels on a platform wagon, for which the contractor receives $2.73 per ton, delivered at the works. For the disposal of the garbage, which is done under the "Holthaus" system, the contractor receives the sum of 34 cents per ton. The works are situated within the city limits, but at some distance from any residences.

The plant has a capacity of about sixty tons, but only from fifteen to twenty tons per day are collected and reduced. The garbage is unloaded into "V" shaped steel dumping cars, which are elevated to the upper floor and run by means of tracks to the various digesters, into the top of which the garbage is dumped. The digesters have a capacity of from five to six tons each. After the digesters have been filled, water is added to the amount of 5 per cent. of the garbage bulk. The digesters are closed

and the garbage cooked under a steam pressure of thirty-five pounds. After the garbage has been cooked for a period of six hours, the steam is shut off and the material is allowed to settle for a period of from twenty to thirty minutes, when the grease and water to the amount of about 40 per cent. of the total bulk is run off through slotted pipes in the digesters leading to the separating tank. The material in the digester is then compressed by the downward pressure of a piston under great hydraulic pressure, which reduces the material to about 35 per cent. of the original bulk, the grease and liquids being conconducted to the separating tank.

A valve in a large connecting pipe between the bottom of the digester and the top of the dryer is then opened and the material forced by the hydraulic press into the dryer below. Two such charges are delivered into the dryer, when the valves are closed and the material dried in the usual form, sixty pounds of steam pressure being maintained in the space about the dryer. In order to facilitate the evaporation of the dryer, a vacuum of fifteen to twenty inches is maintained.

From the dryer the material is run up an elevator to a screen, all the larger material failing to pass the screen being then delivered to the mill, where it is ground and mixed with the other product and stored in the shed as a fertilizing material.

The grease in the separating tank is skimmed off automatically. The water is drained to the evaporators, the steam and vapors from the evaporators being conducted to jet condensers, from which the effluent flows off into the river, clear and almost odorless.

All vapors and gases from the digesters and dryers are drawn off by a vacuum pump and passed by pipes into a separator, from where they are delivered through a jet condenser. The gases are run to the gas tanks and thence forced into the boiler furnaces from the rear.

The features in this plant to be especially commended are, first, the fact that the garbage, after being dumped into the digester, is not again exposed to sight until the material comes out a finished product to be delivered to the screen and the mill, and, next, the clear and almost odorless condition of the effluent.

The plant of this city recently passed into the hands of a receiver by reason of financial difficulties, and, as we were informed, has passed into the hands of the bond-

holders, who have bought in the plant a few weeks ago. The plant, however, has never stopped operating.

No offensive odors could be detected, excepting those due to the raw garbage when being delivered and those of the finished product or tankage found at all reduction works.

At New York City the garbage is disposed of by what is known as the "Arnold" system, the plant being located on Barren Island, some twenty miles from the city. The city collects the garbage in water-tight, iron dump carts and delivers the same at the wharf, where the contractor for the disposal of the garbage receives it on large scows, holding from 300 to 350 tons each. About 600 tons of garbage per day are delivered at present, increasing during the summer months from 800 to 900 tons per day. The contractor receives the sum of 37 cents per ton from the city, which includes both disposal and transportation of the garbage from the wharf, which latter costs about $40 per day.

The scows, when loaded, are towed to the plant on Barren Island. The garbage is fed from the scow into a conveyor, which carries the garbage to the third or upper floor and some distance back from the scow. From this conveyor the garbage is discharged through an opening, and by means of a swinging pipe to either one of a nest of four digesters. There are forty-eight digesters located in four parallel rows, each having a capacity of about ten tons. After the digesters have been filled, a little water is run into them to test the tightness of the lower valves. They are then closed and steam is forced into the digesters at a pressure of from thirty to eighty pounds, according to the nature or condition of the garbage.

The steam pipe enters the bottom of the digester. A pipe to receive the vapors and odors is connected at the top of the digesters, leading through a main pipe to a condenser.

The cooking is continued for a period of from eight to ten hours, after which the cooked liquid material is run from four of the digesters into a receiving tank situated below them. From the receiving tank this hot liquid material is run into gunny cloth forming layers of about four and one-half feet square and four to six inches thick.

The grease and liquid is then pressed out of these layers by a Boomer & Boshert press under a pressure of

about 400 tons. The liquid and grease is run off from the presses into a trough under the floor. After the liquid has been squeezed out and before the pressure is released, the exterior of the layers is washed off with hot water, all of which is drained off under the floor to the grease traps.

No very bad odor is noticed arising from this liquid sludge, but the handling of it in such liquid state from the receiving tank into the presses presents a most filthy and disagreeable sight and the floor is naturally covered with considerable thickness of the grease and sludge as it escapes the sides of the presses or spatters over while flowing from the receiving tank, until it is washed into the trough below the floor.

The solids leaving the presses are about 28 per cent. of the original quantity of the garbage, of which about 3 per cent. is grease. The material is left in the presses for about twenty-five minutes.

From the presses the material is carried in cars to a dump, from where the same is conveyed up to a drying room, and from this drying room the material is dumped into twelve steam jacketed revolving dryers. From these dryers the dried material drops into conveyors, from where it is carried to a screen, and thence the fine material to the wareroom as a fertilizing material, while the coarser material is being wasted outside.

The vapors and gases from the dryers and digesters are conducted by pipe to a jet condenser, where the vapors and gases are absorbed and run with the water into the bay. The grease and water are run through open separating tanks, the grease being skimmed off and the dark brown effluent water being allowed to run into the bay.

The grease is barreled and the solids which have settled in the separating tanks are carried back to the press.

There is no especially commendable feature connected with the method of disposing the garbage at this plant, excepting that the same is located at a great distance from the city. The press floor presents a very filthy condition, although the odors from the cooked or pressed material are not any more offensive than kitchen vapors.

Adjoining the Arnold plant on Barren Island is an old rendering establishment known as the White Plant, where all the dead animals of the city are rendered. This establishment also disposes of condemned meat, fish and

other animal matter, besides disposing of about eighty tons of garbage daily, collected at hotels and restaurants and delivered privately.

The city is under no contract with this plant, the works being operated for the profit there is in the products obtained from the dead animals and garbage delivered to the works.

The average number of horses disposed of is about forty per day, although during the hot period last summer as high as 160 horses per day were disposed of, in addition to a like proportion in other smaller animals.

The hides, tails, hoofs and other valuable parts, are removed, and the larger animals cut up in quarters, placed in a tank, the tank being large enough to hold about eight horses at a time. The process in the tanks consist of cooking, under steam at forty pounds pressume. for a period of from six to eight hours. The grease and fat is run off to tanks by connecting pipes, where it is allowed to settle and finally is bleached. The solid matter and the bones are dried and then ground up for fertilizing material.

The garbage is disposed of by a process similar to the Arnold. The plant is exceedingly clean, free from all offensive odors, and contains no objectionable features. The oils and greases are divided off into different qualities, and great pains are taken to purify and bleach the same, thereby greatly increasing their value in the market.

In order to preserve and increase the value of the fertilizing material obtained from the tankage, oil of vitriol is poured onto the same in the store house.

The effluent is allowed to run into the bay.

At Philadelphia the garbage is collected and disposed of under a contract with the American Reduction Company, the disposal being by what is known as the "Arnold" system.

The plant is located on the east bank of Lower Schuylkill river, below the B. & O. Railway bridge.

The city pays this company for the collection of the garbage, which is daily, and for the disposal thereof, the sum of $223,000.00 per year. This contract covers three of the five districts into which the City of Philadelphia is divided.

The collection and disposal of the garbage of the other two districts of the city is done under a contract with the

American Incinerating Company, the garbage being disposed of by cremation, the plant being located at the corner of Twenty-fifth and Dauphin streets, in a densely populated district in the northwestern part of the city. The city pays the incinerating company for the collection and cremation the sum of $160,000 per year.

At the Arnold plant the garbage is delivered in dumping carts of one or two tons capacity, and dumped through openings on an outside platform, the garbage dropping into a receiver, from whence it is raked into a conveyor, similar to the one used on Barren Island to convey the garbage to the third floor. Some garbage is also delivered at the dock by scows.

From 250 to 300 tons of garbage is being daily delivered at this plant. The garbage is conveyed into digesters in the same manner as at Barren Island, and cooked from five to seven and one-half hours under steam pressure of forty-five pounds. There are twenty digesters of ten tons capacity each. As at Barren Island, the steam enters the digesters from below, and the vapors and odors are conducted through a pipe leading from the top to the condensers.

The liquid material is run from the digesters into receiving tanks, and from there into presses as described at the Barren Island plant.

The grease and liquid is pressed out by Boomer and Boshert presses into a trough leading to separating tanks. The pressed cakes are elevated on cars to an upper floor, where they are broken up and thence dropped into revolving dryers below, where the material is dried for a period of from one and one-half to two hours, under sixty pounds steam pressure. From the dryers the material is dropped into a screw conveyor, which delivers the tankage to a screen, the finer particles being thence conveyed to a shed as fertilizing material and the coarser being used for fuel in the boiler furnaces. This material burns very rapidly and is said to contain 50 to 55 per cent. of fuel, of which 5 to 6 per cent. is grease.

All vapors and gases from the digesters and dryers are conveyed into the effluent from the grease separating tanks, and discharged as a dark brown liquid, said to contain about 8 per cent. of solids, into the Schuylkill river.

The plant is in its general features the same as the one at Barren Island, excepting that the buildings are of brick

and the floors of the press room are constructed of concrete, and hence does not present quite so unclean an appearance as the floors at Barren Island.

While at Philadelphia we visited an experimental garbage reduction plant located at East Cumberland and Almond streets, in a densely populated district of the city, operated by a Dr. Rismiller. This plant is not working under a contract with the city, but is receiving from the American Incinerating Company of Philadelphia on an average about 50 tons of garbage per day, relying upon the fertilizing material, oil and grease obtained from the garbage, to pay for the operation of the plant.

The garbage is fed into the top of digesters of six tons capacity, as in the Arnold system. To each digester full of garbage, however, 300 pounds of sulphuric acid, 50 degrees Beaume, is added by forcing it on top of the garbage by means of an air pump. The digester is then closed, steam let in through the bottom of the digester, and the garbage cooked for a period of three hours. The interior of the digesters are lined with lead, so as to protect the iron against action from the acid.

The sulphuric acid thoroughly digests all the garbage, rags and other fibrous matter, so that when the cooking process is completed no fibre or bulky substance is left in the tankage, excepting whatever metal or glass may have been fed into the digesters with the garbage. After the cooking is completed the liquid in the digesters is allowed to stand and the grease is skimmed off from the top, after which the liquid is discharged through a pipe directly into the dryer, and enough ashes added to neutralize the acid left in the liquid.

After drying the tankage is drawn from the dryers in fine granulated form, while the vapors are conducted to a condenser and the clear effluent discharged into the sewer.

In order to get better results in the boilers, the superintendent at this plant generates gas in a retort and conducts the gas to the boiler furnaces, claiming considerable economy in fuel in this method. The gas from the top of the digester is conducted to this gas producer, and with the gas goes to the boiler furnaces.

Dr. Rismiller contemplates separating the grease and oil from the water and from the solids by a centrifugal pump. In a small scale he is now producing this operation successfully, and it is his intention to place a centri-

fugal pump separator in the space between the bottom of the digester and the top of the dryer, separating the solids, the water and oil by centrifugal motion acting upon the substances through the differences in their specific gravity. He claims that by this process he can separate all of the grease particles from the water in a quicker and more thorough and complete manner.

There seems to be no doubt that he is succeeding in extracting a larger percentage of the grease out of the garbage and in obtaining a much better grade of fertilizer.

If his combination should prove successful, the operation will be most complete without exposure to the air from the time the digester is charged until the tankage is withdrawn from the dryer.

From the dryer the tankage is conveyed to a screen where the tin cans, bottles and other like substances are removed.

The cremation plant heretofore mentioned is operating what is called the Smith-Siemens Furnace, and is disposing of about 180 to 220 tons of garbage per day. There are four furnaces surrounding the gas generating retort in the center. The coal is fed into the center gas generating retort, from which the gas is conducted through underground conduits into one end of the furnace, where it is mixed with air, the flames passing over the garbage downward and then under the garbage on the other side, thence to the stack. This is continued for about a half an hour, when the gas is passed in from the opposite side of the furnace, passing over the garbage at that end and then under at the opposite end.

The garbage is delivered in iron dumping carts, which are backed up to either of the two openings in the top of the furnace, the lid removed and the garbage dumped directly into the furnace. The heat in the furnace is intense. At this plant some of the liquid drains through the garbage to the bottom of the furnace, and from there flows out into the sewer.

About thirty tons of garbage is delivered into each half of the furnace, and about one ton of coal is used for generating sufficient gas to burn ten tons of garbage. The furnaces are fed with garbage during the day and the cremation is completed during the night. The ashes are sifted and the fined particles used for fertilizing material.

At Washington the garbage is collected and disposed by cremation by J. M. Warfield, under a contract with the district commissioners, running for a term of five years, for which the commissioners pay the sum of $57,000 per year.

About seventy to seventy-five tons of garbage are being collected at present, and the disposal of the garbage must be to the satisfaction of the commissioners.

Mr. Warfield entered into contract for the construction of a Brown Cremation Furnace, which was erected in the southern part of the city. The plant was to cremate 100 tons of garbage per day without creating offensive or obnoxious odors. The Brown Furnace was visited, but was not in operation, as the plant had failed to fulfil the requirements of the contract. A test run had been made, and the eight furnaces were found to consume but sixty-five tons of garbage per day.

The garbage is fed into the top of the furnaces, dropping upon fire brick arches, separated by spaces through which the liquid runs to the lower floor. Four furnaces are located on each side of the stack which is placed in the center of the plant. The firing furnaces are placed at the outer end of each row of the cremating furnaces. The flame first goes over the garbage, then back underneath, drying the garbage from below, then returns under the floor, where it evaporates the liquids, to the stack, the gases passing through a fire in a specially constructed furnace at the base of the stack.

The burnt garbage drops through the spaces between the arches into the ash pit onto the floor below. The ashes are withdrawn through openings in the rear part of the garbage furnaces, and are sold at $4 per ton. About one ton of ashes is obtained from ten tons of garbage.

The arches seemed to have given way under the action of the heat, and we are informed that this plant is not satisfactory to the commissioners because it is unsanitary.

Mr. Warfield also entered into a contract for the construction of a Smith-Siemens Furnace, the same to have a capacity of burning 100 tons of garbage per day at a cost not to exceed 30 cents per ton for coal and labor, the same to be subject to the approval of the district commissioners as to sanitary requirements.

This furnace is located in the southwestern part of the city, and was undergoing a test to ascertain whether it is

capable of meeting the terms of the contract. It consists of four furnaces with the gas retort or generator at one side of the furnaces, leaving space for four furnaces to be erected at the other side of the gas retort. This test demonstrated that the furnaces were not capable of burning 100 tons of garbage per day without generating offensive odors.

The garbage was being collected in water-tight iron carts, having close shutting lids, the garbage being dumped by means of a crank and gear. The capacity of these carts were one and two tons. They were backed up to the opening of the furnaces and the garbage dumped therein.

The gas is generated in the retort and then conducted by a conduit under the floor into a checking chamber, where the gas is mixed with fresh air, passing thence into the garbage furnaces over the garbage downward into a connection leading to a similar furnace on the opposite side. Every twenty minutes the flow of the gas was changed from one end to the opposite end of the furnace. The combustion was quite complete. The ashes are withdrawn through an opening in the side, emptying downward into what is called an ash barrel, so that the ashes could be withdrawn from beneath on the floor.

About seventy-five to eighty tons of garbage were being burned by these furnaces, which required four tons of coal mixed with screenings, the cost being on the average $1.25 per ton. This furnace was not considered satisfactory from a sanitary standpoint, while an attempt was made to burn 100 tons of garbage per day, and it was decided to test the furnace at a rate of fifty tons of garbage per day to see if the same could be done in a sanitary manner and to the satisfaction of the district commissioners.

This plant was in several points an improvement upon the furnaces in use at Philadelphia.

Objections, however, were raised against the operation of these furnaces by prominent citizens living in the neighborhood of this plant.

At Dayton we found a Dixon Crematory, owned by the city, disposing of the garbage. The city collects all domestic garbage only, in water-tight iron tanks. Hotel garbage, garbage from commission houses, or decayed meats from meat markets, night soil and other refuse

material are required to be delivered by private collection to the cremation plant, for the disposal of which the different parties are obliged to pay a fixed sum per hundred pounds.

About fifteen tons of garbage are being collected. The same is carted onto the top floor of a very handsomely constructed building, and dumped into the top of the furnaces. There are six furnaces in two rows, on each side of the stack.

Each furnace is supposed to hold about five tons, and one side or three furnaces are first filled, when the flames are passed both over and under the garbage.

It is said to take about sixteen hours to thoroughly burn this amount of garbage. The garbage is raked both on top and on the bottom. The fires are continued through the night and the cremation is completed by morning. At the end of these furnaces are the firing furnaces in two tiers, the flame from the lower furnace going under the garbage grates and the flame from the upper furnace going over the garbage. The lower flame evaporates the fluid dripping through the grates which support the garbage, the vapors and odors going with the draft through the grates supporting a fire in the bottom of the stack maintained for that purpose. The raking holes for raking the garbage below are on the lower floor and on the side of the cremating furnaces.

But three men are employed at this plant, two during the day and one at night. About four tons of coal per day are used, coal costing $1.84 per ton.

The collection of garbage is only once a week in a certain part of the city, and twice in another part of the city, so that the garbage is quite offensive when it reaches the crematory.

A test is now being made as to the amount of coal required to consume a given amount of garbage. During the week preceding our visit 105½ tons of garbage, about two tons of night soil, seven barrels of fish, three and one-half barrels of feathers and twenty-two dogs were cremated.

The amount of coal consumed to do this work was twenty-six and one-half tons and 350 bushels of coke.

Seven wagons are used for collecting the city garbage at a cost of about $5 per wagon per day, including labor of collection.

Though there were no offensive odors apparent during the time of burning, excepting when the garbage was fed into the furnaces, there was bitter complaint made by some who live at an elevation and a short distance from the plant, on account of the offensive odors said to be escaping from the stack.

The plant was kept in a clean condition; the approach to the building was through a handsome lawn with flower beds between the driveways.

The resolution adopted by your honorable body contemplates a visit by your committee to the "several places where systems of garbage disposal proposed in the several bids submitted to this body are in actual operation;" we therefore deemed it necessary to visit the plant of the Wisconsin Rendering Company, as they had submitted a bid under the last advertisement for garbage disposal.

Accordingly, your committee visited the plant at Mequon, where the garbage is disposed of under the old Merz system. The garbage is being collected in iron boxes and delivered to a steam barge near the foot of Walker street in the Fifth ward. Here the iron boxes are emptied by dumping the garbage out of them onto the deck of the barge. The garbage is transported from this point to a pier in the lake opposite the plant near Mequon.

The garbage is then loaded into a swinging bucket and dumped into small cars on the pier, which are hauled up a steam inclined railway by cable to the works, and the garbage dumped on the floor. On this floor the garbage is again handled by being shoveled into the top of twelve dryers, each having a capacity of about two tons. The tin cans, bottles and rags are here sorted out of the garbage. The garbage remains in the dryers for a period of about six hours, during which time all of the water is supposed to be evaporated out of the garbage, leaving the residue about 20 per cent. of the original bulk in weight.

The dried garbage is conveyed by elevator to the extracting room and fed into four extractors, each having a capacity of from two and one-half to three tons.

Benzine is then added from the benzine tanks, and allowed to saturate the garbage for about one hour. The material is then heated and the benzine and grease run off through an incline perforated false bottom through an opening into the grease tank. This process takes about ten hours.

The grease tank is then put under a steam pressure of about seventy pounds in order to evaporate the benzine, which is carried back through condensers to the benzine tank. The material from the extractors is then withdrawn, run to the mill, ground up and conveyed to a screen from where it is carried to the warehouse as a fertilizing material.

During last fall two digesters, similar in construction to those used in Detroit, and of three and one-half tons capacity each, were added to the plant. The garbage is fed into these two digesters, cooked for about four hours under a steam pressure of about seventy pounds, and the water and grease run off from the digesters under the above steam pressure in the same manner as is being done at Detroit.

The material is then withdrawn from the digesters and fed into dryers with the other garbage.

The dead animals, after being cut, are deposited in cooking tanks, where they are cooked for a period of seven hours under steam at a pressure of thirty pounds. The grease is then drawn from the top of these tanks and the solids go into the dryers with the garbage.

The grease and water taken from the digesters, is conducted into separating basins, where it is kept cooking by inserting steam, the grease being withdrawn from the top and the water run off near the bottom to another separating basin. All floor wash and the condensation water from the benzine tanks and the water used for condensing of all vapors, is drained into a catch basin, and from there into this same separating basin, from where the water is emptied through a sewer and thence into the lake. This water is warm and carries a large per cent. of solids with it. This effluent is not filtered as required by the contract.

The vapors from the dryers, the digesters and the animal rendering tanks are conducted through a series of jet condensers, where the soluble gases are run off with the water into the catch basin, and thence into a sewer, while the insoluble gases are conducted into the fires under the boilers.

The garbage floor, because of the method of handling the garbage, is in a filthy condition, nor is the method of handling the garbage throughout at all up with the improved methods applied in eastern cities.

An objectionable feature is the method in which the garbage is transported and handled at the works, and also the condition of the effluent that runs into the lake.

Your committee found on its visit to the several garbage disposal plants that in most instances where such plants were located within the limits of the city, the same were situated in such districts as to remove them some distance from any residence section or habitation.

The plant at Bridgeport might as well be outside the city, so far as its proximity to a residence section is concerned, likewise that of the Arnold plant in Philadelphia and the cremation plants in Washington.

The Dayton plant is in a sparsely settled district of the city, yet in all of these places some complaint was made by the citizens, and where plants are located in a well populated district, like the cremation plant and the Dr. Rismiller plant in Philadelphia, very bitter opposition was raised by the neighborhood against the continuation of the plants. In some of these cases we could discover no valid reasons, during our visit, for the objections made, yet the opposition will undoubtedly continue until they have succeeded in having the plants removed.

The examination of the several methods above mentioned shows that only one system is in practical operation, which receives the garbage from the wagon, into a steam-tight receiver, or digester, from which time the garbage, gases and effluent remain continuously in containers, and are not exposed to the air at any time until it is dried, condensed or evaporated, and are no longer unsanitary or offensive, and the effluent, without color and practically odorless. This method is known as the "Holthaus" system.

There are other mechanical appliances at the several plants visited, which, if combined, would be, in the opinion of your committee, as sanitary and unobjectionable as the method referred to, but we know of no such plant.

Therefore, we respectfully call your attention to this method as the most satisfactory and sanitary garbage reduction plant which we saw in operation.

Samples of the effluent were taken from the works at Detroit, Bridgeport, Barren Island, Arnold plant at Phila-

delphia and the works at Mequon, and are in the hands of the committee, subject to your inspection.

Respectfully submitted,

W. H. STEVENS,
O. T. RENNING,
HENRY C. SCHRANCK,
WALTER KEMPSTER,
G. H. BENZENBERG,
City Engineer.
The Committee.

The report was referred by the Common Council to the Committee on Judiciary and Health, and the select committee consisting of Aldermen Stevens, Renning and Schrank, the City Engineer, Commissioner of Health and City Attorney.

At the same session of the Common Council a communication was submitted by the Wisconsin Rendering Company relative to the date upon which their contract would expire, which is as follows:

MILWAUKEE, WIS., June 21st, 1897.

To the Honorable the Mayor and the Common Council of the City of Milwaukee:

Gentlemen—The contract of the Wisconsin Rendering Company with the City of Milwaukee for the collection, transportation and disposal of garbage expires on the 24th day of June, 1897.

As your honorable body has not yet entered into a contract for the disposal of the garbage after the 24th day of June, 1897, we desire your instructions as to whether or not we shall continue the collection, transportation and disposal of the garbage of the City of Milwaukee after that date.

Yours respectfully,
WISCONSIN RENDERING CO.,
By FRED. C. GROSS, *President.*

This was referred to the joint Committee on Judiciary and Health and the City Attorney, and thereafter, on the 23rd day of June, at a special meeting, the joint committees and City Attorney submitted the following:

To the Honorable the Common Council:

Gentlemen—The undersigned, Committees on Judiciary and Health and City Attorney, to whom was referred the communication of the Wisconsin Rendering Company relative to the collection and disposal of the garbage of the city after June 24, report that they met with the representatives of the Rendering Company and fully considered the matter. After much discussion the representatives of the Rendering Company offered to accept the construction as to the time of the expiration of the present contract for disposing of the garbage contended for on behalf of the city, and that the contract should be construed as being in full force until August 25, 1897. Inasmuch as such a construction of the contract will provide for the disposition of the garbage until the date named, the adoption of the accompanying resolution is recommended.

Resolved, By the Common Council of the City of Milwaukee, That it is hereby declared to be the true intent and meaning of the contract for the collection and disposition of garbage and dead animals, entered into by the said city with Henry A. Fleischmann on March 12, 1892, and afterwards assigned to the Wisconsin Rendering Company, that the date of the expiration of said contract is the 25th day of August, 1897, and said contract is hereby construed to expire on said day.

Resolved further, That the Mayor and City Clerk be, and they are hereby authorized and directed, on behalf of the city, to execute a written agreement with the Wisconsin Rendering Company placing such a construction upon said contract.

Thus it appears that the original interpretation placed upon the terms of the contract relative to the date upon which it would expire was sustained by the committee and the City Attorney, but that there might be no misunderstanding as to the work to be done by the Rendering Company in the future an agreement was made in writing which gave definitiveness to the time when the contract would expire, which was now so close at hand that it would be practically impossible to provide a new apparatus for the destruction of garbage, and unless the contract should be renewed with the Wisconsin

Rendering Company temporary provision would be required for its disposal.

On the 28th day of June, 1897, at a special meeting of the Common Council, two reports were again presented, a majority and a minority report. These reports are as follows:

To the Honorable the Common Council:

Gentlemen—The undersigned being a majority of the members of the joint Committee on Judiciary and Health and select committee of three, to whom was referred the report of the special committee appointed to investigate the several systems of garbage disposal proposed in the bids heretofore submitted to your honorable body for the disposition of the city's garbage and dead animals, having carefully considered the matter, and having heard the additional statements of the City Engineer and Commissioner of Health relative to the advantages to be gained by locating the plant for the disposition of the garbage and dead animals at some convenient point within the city limits, respectfully submit the following as their report:

From the report of the special investigating committee and the statements made by the City Engineer and Commissioner of Health it is shown beyond question that a system by means of which garbage and dead animals can be disposed of in a sanitary and inoffensive manner within the city limits is already in successful operation in another city. The conditions of the published notice inviting proposals and the specifications upon which the same were based, in accordance with which the work of collecting and disposing of the garbage and dead animals is to be done, are amply sufficient to guarantee and compel the performance of the work in an inoffensive and sanitary way. The site to be selected, if within the city limits, must be approved by the Commissioner of Health, and no site can be used which is not so approved by him. This will guarantee a location which cannot in any way affect the public health. There are many advantages to be gained by the location of the plant for the disposition of the garbage and dead animals within the corporate limits. Among them attention may be called to the following:

By reason of the plant being located nearer to the material to be collected and disposed of, the cost of trans-

portation is greatly decreased and less time elapses between its collection and reduction. Garbage can be more frequently collected, and, as it will be disposed of and reduced or rendered immediately and continuously, there will be no opportunity for it to become offensive and injurious to the health. Should the city determine to purchase the plant and thus assume the disposition of its garbage, the location within the limits of the city will save a large share of the cost of transportation which would be necessary were an outside location selected. There would be far less danger of the operation of the plant, when under municipal control, being interfered with by injunction suits or other local proceedings if within the city, for the reason that it would not then be subject to interference from town boards of health and other local municipal authorities. Lastly, it appears that under the present bids which have been received for the collection and disposition of the garbage, a very large saving can be effected to the city by the location of the reduction plant within its limits.

For these reasons we are of the opinion that the public interests will be best served by the location of the plant for the reduction of the garbage and dead animals within the city limits, and we therefore recommend the adoption of the accompanying resolution:

Resolved, By the Common Council of the City of Milwaukee, That in the consideration and acceptance of the bids and the awarding of the contract for the collection, transportation and disposition of garbage and dead animals, the location of the plant for the reduction and disposition thereof should be inside the corporate limits of the city, to be located on such a site as shall be approved by the Commissioner of Health.

Following is the minority report:

To the Honorable the Common Council:

Gentlemen—The minority of your joint Committee on Judiciary, Health and special committee appointed to report on various systems of garbage disposal, after visiting and inspecting the same, to which joint committee was referred the report of the special committee, have carefully considered the whole matter with reference especially to the location of a garbage plant inside or outside of the city limits. Weighing all conditions attending

the collection and disposition of garbage, both in the light of experience in the past three or four years and in view of the information secured by the special committee, we feel that it would be contrary to the best interests of the city to let any contract for the disposition of garbage within the city limits.

We therefore offer the following resolution and respectfully ask its adoption:

Resolved, That in the examination of propositions and bids for the disposition of garbage and dead animals, and in the letting of the contract for the same, either upon bids already received or which may be presented by other advertisements, that no plan or proposition or bids shall be considered for the disposition of the garbage and dead animals within the city limits.

After considerable discussion concerning these reports a motion was made that the whole subject be laid over until the next meeting, which motion prevailed, and no further action was had until the 6th day of July, 1897, when extended debate occurred as to the reports presented by the majority and by the minority, and finally the report of the majority of the Committees on Judiciary, Health and select committee was adopted, which located the plant inside the city limits; the vote was 35 in favor of locating inside and 7 in favor of the outside situation.

At an adjourned meeting of the Common Council held on the 7th day of July, 1897, two reports were again submitted, a majority and a minority report, these reports relating to the method which should be employed for the purpose of treating the garbage. They are as follows:

To the Honorable the Common Council:

Gentlemen—The undersigned, a majority of your joint Committee on Health and Judiciary, to whom was re-referred a communication of the Board of Public Works transmitting propositions and bids for the collection, transportation and disposal of garbage and dead animals of the City of Milwaukee, have given the matter careful consideration, and report thereon by the accompanying resolution, the adoption of which is recommended.

Resolved, By the Common Council, That the process known as the "Holthaus" system, is, in their judgment, the best and most sanitary for the disposal of garbage within the city limits, and selects the same as the process to be employed.

Resolved further, That the Board of Public Works be, and is hereby authorized and directed to enter into a contract, in accordance with the provisions of the notice to bidders and specifications on file in their office, with Messrs. Crilley and O'Donnell, they being the lowest bidders for the collection, transportation and disposal (within the city limits by the "Holthaus" system) of garbage and dead animals of the City of Milwaukee, for the period of five years from and after ninety days after the date of execution of said contract, or if the plant for the reduction of said garbage and dead animals shall be completed and in successful operation within said ninety days, then from the date when such plant shall be so completed and successfully operated, for the sum of $274,500.00 for the entire five years, as per their bid submitted to the Board of Public Works on May 22, 1897.

To the Honorable the Common Council:

Gentlemen—The minority of your joint Committee on Health and Judiciary, to whom was referred a communication from the Board of Public Works transmitting propositions and bids for the collection, transportation and disposal of garbage and dead animals, report as follows:

Your minority dissents from the opinion of the majority which recommends the location of a garbage reduction works within the limits of the city. The undersigned are of the opinion, and firmly believe that garbage and dead animals cannot be rendered in an entirely odorless manner, and we, therefore, cannot approve of any bid which contemplates the location of a plant in the City of Milwaukee. The difference in price between the lowest bid outside of the city that has been submitted for an inside plant is very insignificant, when it is taken into consideration that the city will be free from constant litigation, which we feel sure will follow the location of the reduction works within the city. We, therefore, believe that the interests of the city will be best subserved by letting the contract to the parties offering to do the work at the lowest price outside of the city limits, which is by the process known as the "Arnold" system.

The accompanying resolution is respectfully presented with the recommendation for adoption.

Resolved, That this Common Council determines that the process known as the "Arnold System" is, in their judgment, the best and most satisfactory for the disposal of garbage outside of the city limits.

Resolved further, That the Board of Public Works be, and is hereby authorized and directed to enter into a contract, in accordance with the provisions of the notice to bidders and specifications on file in their office, with Messrs. Cooper & Burke, they being the lowest bidders for the collection, transportation and disposal (outside of the city limits), by the "Arnold" system, of the garbage and dead animals of the City of Milwaukee, for a period of five years from and after ninety days after the date of execution of said contract; or if the plant for the reduction of said garbage and dead animals shall be completed and in successful operation within said ninety days, then from date when such plant shall be so completed and successfully operated, for the sum of $300,000 for the entire five years, as per their bid submitted to the Board of Public Works, under date of May 22, 1897.

Resolved further, That a certain resolution adopted by the Common Council at a regular meeting held July 6, declaring that the location of a garbage reduction works be located within the limits of the City of Milwaukee be, and the same is hereby rescinded.

After a lengthy debate upon the systems the report and resolution of the majority was adopted by a vote of 35 to 6, which prevailed, for the adoption of what was then called the "Holthaus" system, and awarding the contract to Messrs. Crilley and O'Donnell, they being the lowest bidders, for the term of five years, and for the gross sum of $274,500.

No further public action was taken to advance the interests of the city until the 28th day of July, when, at a special meeting of the Common Council, his honor the Mayor, transmitted the following communication:

MAYOR'S OFFICE,
MILWAUKEE, July 28th, 1897.

To the Honorable the Common Council:

Gentlemen—As you have probably been informed through the press, the parties to whom the contract for

the disposal of the garbage was awarded, have refused to sign the same. This places us in the same position as we were months ago, with the exception that some of us are more convinced than ever that the destruction of garbage is a very profitable undertaking and should not be done by private corporations, but these profits should be secured to the taxpayers by the erection of a municipal plant. I would strongly recommend to your honorable body that immediate steps be taken towards the erection of a municipal garbage plant. I believe that a saving of from $35,000 to $40,000 per annum can be made if the proper system be chosen. I have figures in my possession which will verify the statement I have made, and am ready at any time to produce them to any of your committees to which such subject matter may be referred.

The erection of a city garbage plant would not alone be a profitable investment to the city, but would in the future also prevent these unpleasant struggles which we have gone through since the last ten months.

Any assistance which I may be able to give you will be cheerfully rendered.

Respectfully submitted,

W. G. RAUSCHENBERGER,

Mayor.

This was followed by a communication from the Board of Public Works, as follows:

OFFICE OF THE BOARD OF PUBLIC WORKS,

MILWAUKEE, July 28, 1897.

To the Honorable the Common Council:

Gentlemen—In accordance with your resolution of July 7th, 1897, the Board of Public Works took the necessary steps to contract with Messrs John J. Crilley and Jas. O'Donnell for the collection, transportation and disposal of the garbage and dead animals of the City of Milwaukee, for the term of five years.

Owing to some difficulty, commonly reported to be of a financial nature, Messrs. Crilley and O'Donnell neglected to promptly execute the contract, and after ample and sufficient time had been given them, the Board of Public Works, on Tuesday, July 27, 1897, made the following order (copies of which were officially served on the same

day on John J. Crilley, Jas. O'Donnell, and their sureties, C. H. Sullivan and Edward Keogh), to-wit:

WHEREAS, on the 7th day of July, 1897, the Common Council of the City of Milwaukee adopted a resolution authorizing and directing the Board of Public Works to enter into a contract with Messrs. John J. Crilley and Jas. O'Donnell, they being the lowest bidders, for the collection, transportation and disposal of the garbage and dead animals of the City of Milwaukee, for a period of five years, as set forth in said resolution; and,

WHEREAS, The said John J. Crilley and Jas. O'Donnell have negligently failed and refused and still fail and refuse to execute and enter into said contract,

It is Ordered, That the said John J. Crilley and Jas. O'Donnell be, and are hereby ordered and directed to duly execute on or before the hour of 4 o'clock P. M., on the 28th day of July, 1897, and enter into the said contract with the City of Milwaukee, for the said collection, transportation and disposal of the garbage and dead animals of the City of Milwaukee, for a period of five years, failing in which the said John J. Crilley and Jas. O'Donnell will be declared in default, and their said default will be duly communicated without delay to the Common Council of said City of Milwaukee.

Ordered further, That the said John J. Crilley and Jas. O'Donnell, and their sureties, C. H. Sullivan and Edward Keogh, will be duly served with a copy of this order.

Messrs. Crilley and O'Donnell have failed to execute the said contract as directed in the said order, and have failed to make any contest or defense within the time limited.

The Board, therefore, at a meeting held at 4:30 o'clock this day, made the following order, viz.:

Ordered, That John J. Crilley and Jas. O'Donnell, having failed and refused to enter into a contract with the City of Milwaukee for the collection, transportation and disposal of the garbage and dead animals of the City of Milwaukee, for a period of five years, according to the terms of their proposal, and as authorized by the Common Council on July 7, 1897, be, and they are hereby declared to be in default, and that the Common Council of the City of Milwaukee be duly informed of said default.

Formal notice of the said default is now herewith respectfully given to your honorable body.

G. H. BENZENBERG,
PAUL MUENZENBERG,
S. J. BROCKMAN,
Commissioners of Public Works.

At the same session a communication was read, purporting to be signed by Jas. O'Donnell and John J. Crilley, which is herewith presented:

To the Honorable the Common Council of the City of Milwaukee:

Gentlemen—At the time we submitted our bid on the 22nd day of May, 1897, for the collection and disposition of all garbage and dead animals in the City of Milwaukee, we had absolute assurance that capital in abundance would be available to enable us to enter into a contract with the city for the doing of such work at a plant to be erected within the city limits. Owing, however, to the delay of your honorable body in awarding the contract to us (it not being available to us until the 7th day of July, 1897), and the great opposition to the disposition of garbage within the city limits, the threatened injunction and damage suits, the active efforts of other bidders to prevent the awarding of the contract to us, and various other reasons over which we have had no control, the parties who had agreed to furnish capital for the construction of the plant have become timid and refuse to furnish the money, and we are unable to enter into the contract. No one can regret our inability so to do as much as we. For twenty-five years and upwards we have been doing contract work for the City of Milwaukee, and never yet failed to enter into and carry out our contracts in accordance with our bids. But for the reasons stated above, it is impossible for us to do so in this instance. Had the contract been promptly awarded upon the receipt of the bids, and before the opposition had assumed the strength it subsequently did, we believe the plant would by this time have been nearly completed.

For the reasons indicated we respectfully ask your honorable body to release us from the obligations of our preliminary bond which accompanied our bid, in accordance with the practice which has heretofore prevailed in

the city, less such expenses as the city may incur by a readvertisement.

JAS. O'DONNELL,
JOHN J. CRILLEY.

At the same session the following resolution was introduced:

WHEREAS, On the 7th day of July, 1897, the Common Council of the City of Milwaukee duly awarded a contract for collecting, transporting and disposing of the garbage and dead animals of said city, for the term of five years, to John J. Crilley and James O'Donnell; and

WHEREAS, The said John J. Crilley and James O'Donnell have failed and refused to execute said contract on their part; and have been declared in default;

Resolved, By the Common Council of the City of Milwaukee, That the Board of Public Works of said city be, and is hereby instructed to immediately advertise for proposals or bids for doing the work of collecting, transporting and disposing of the garbage and dead animals of the City of Milwaukee, for a period of five years from the 25th day of August, 1897, or from such date thereafter as the work of collecting and disposing of said garbage and dead animals shall be in successful operation; each proposal of bid to state an aggregate sum per year for doing the entire work of collecting, transporting and disposing of said garbage and dead animals, and to be accompanied by such bond as will guarantee to the city the execution and fulfillment of the contract, and that within ninety days from the execution of the contract the work shall be in successful operation in case the proposal or bid is accepted. Each proposal or bid must be accompanied by a full statement by the party offering it of the manner or method in which the garbage and dead animals are to be disposed of, and must state whether the reduction plant will be located within or outside of the city limits, and no bid not containing such statements will be considered. The plans and specifications for doing such work shall be prepared by the Board of Public Works, with the assistance of the Commissioner of Health and City Attorney.

Resolved further, That all proposals or bids received be forthwith submitted to the Common Council for further action thereon, and that in such advertisement the right

shall be reserved to the Common Council to determine before accepting any proposal or bid the system to be employed in the disposal of garbage and dead animals, and whether the disposal plant shall be located within or without the city limits, and to reject any and all proposals or bids.

At the same meeting a resolution was introduced to provide for the purchase of ground and the construction of buildings, as follows:

Resolved, By the Common Council of the City of Milwaukee, That the City Engineer be, and he is hereby directed forthwith to prepare the necessary plans and specifications for the erection of a building and the necessary foundations for machinery, etc., for the disposition of the garbage and dead animals of the city.

Resolved further, That the Board of Public Works be, and is hereby directed, immediately upon the completion of such plans and specifications, to advertise pursuant to law for proposals or bids to erect and construct said building and foundations according to such plans and specifications.

A resolution was also introduced for machinery and apparatus to be placed therein. This read as follows:

Resolved, By the Common Council of the City of Milwaukee, That the Board of Public Works be, and is hereby directed to forthwith prepare the necessary specifications and advertise pursuant to law for proposals or bids to furnish to said city and set up ready for operation all necessary machinery and apparatus for the complete and sanitary disposition, either by reduction, conversion or consumption, of all garbage and dead animals within the limits of said city, together with the right to use and operate the same in case of patents thereon. Each proposal or bid must state fully the manner or method in which the said garbage and dead animals are disposed of by the machinery and apparatus offered, and the length of time and cities in which said machinery or apparatus is or has been in operation, and all proposals or bids not containing such statements will not be considered; and the said Common Council hereby expressly reserves to itself the right before accepting any proposal or bid to determine

which method or system for the disposal of garbage and dead animals shall be selected. Each proposal or bid must also be accompanied by such bond, the penalty thereof to be determined by said Board of Public Works, as will guarantee to the city the execution and fulfillment of the contract, and that within ninety days from the execution of the contract such machinery and apparatus shall be furnished and set up complete and ready for use; and said contract when executed, in addition to all other provisions, must require the contractor to guarantee the machinery and apparatus furnished to dispose of the garbage and dead animals in an inoffensive and sanitary manner, and that no payment shall be made therefor until after the operation shall be approved by the Mayor, City Engineer and Commissioner of Health. All proposals or bids received must be forthwith submitted to said Common Council for action thereon; and the right be reserved to said Common Council to reject any and all proposals or bids received.

It was now within one month of the time when the contract with the Wisconsin Rendering Company would expire, and a resolution was presented as follows:

Resolved, That the Commissioner of Health report to this Common Council, at its next regular meeting, what provisions, if any, have been made as to the collection, etc., of garbage succeeding the expiration of the temporary agreement now in force between the City of Milwaukee and the Wisconsin Rendering Company.

On the 30th day of July a special meeting was called to take into consideration the issuing of what were called "Garbage Disposal Bonds," the issuing of which were provided for by an ordinance authorizing the issuing of such bonds, and, as in other instances relative to the garbage matter, there were two reports, one presented by the majority and the other by the minority, and there was considerable debate on each of these reports, but no decided action was taken; two resolutions, however, were presented from the Committees on Finance, Health, Public Buildings and Grounds, being reported by a majority and minority.

Ald. Renning presented the following minority report:

Resolved, By the Common Council of the City of Milwaukee, That the City Engineer be, and he is hereby directed forthwith to prepare the necessary plans and specifications for the erection of a building and the necessary foundations for machinery, etc., for the disposition of the garbage and dead animals of the city.

Resolved further, That the Board of Public Works be, and it is hereby directed, immediately upon the completion of such plans and specifications, to advertise pursuant to law for proposals or bids to erect and construct said building and foundations according to such plans and specifications.

To the Honorable the Common Council:

Gentlemen—The majority of your Committee on Finance, Health and Public Buildings and Grounds recommend that the resolution instructing the Board of Public Works to advertise for bids for machinery and apparatus for a garbage disposal plant, be indefinitely postponed.

Ald. Renning, from the Committees on Finance, Health and Public Buildings and Grounds, presented the following minority report, countersigned by the Comptroller, in favor of adopting the following resolution, viz.:

Resolved, By the Common Council of the City of Milwaukee, That the Board of Public Works be, and is hereby directed to forthwith prepare the necessary specifications and advertise pursuant to law for proposals or bids to furnish said city and to set up ready for operation all necessary machinery and apparatus for the complete and sanitary disposition, either by reduction, conversion or consumption, of all garbage or dead animals within the limits of said city; together with the right to use and operate the same in case of patents thereon. Each proposal or bid must state fully the manner or method in which said garbage and dead animals are disposed of by the machinery and apparatus offered and the length of time and cities in which said machinery or apparatus is or has been in operation, and all proposals of bids not containing such statement will not be considered; and the said Common Council hereby expressly reserves to itself

the right before accepting any proposal or bid to determine which method or system for the disposal of garbage and dead animals shall be selected. Each proposal or bid must also be accompanied by such bond, the penalty thereof to be determined by the said Board of Public Works, as will guarantee to the city the execution and fulfillment of the contract, and that within ninety days from the execution of the contract such machinery and apparatus shall be furnished and set up complete and ready for use; and said contract when executed, in addition to all other provisions, must require the contractor to guarantee the machinery and apparatus furnished to dispose of the garbage and dead animals in an inoffensive and sanitary manner, and that no payment shall be made therefor until after the operation thereof shall be approved by the Mayor, City Engineer and Commissioner of Health. All proposals or bids received must be forthwith submitted to said Common Council for action thereon; and the right be reserved to said Common Council to reject any and all proposals or bids received.

To the Honorable the Common Council:

Gentlemen—The (majority) of your Committee on Finance, Health and Public Buildings and Grounds recommends that the resolution to acquire lands by purchase, lease or condemnation proceedings, for a municipal garbage disposal plant, be indefinitely postponed.

Ald. Renning, from the Committees on Finance, Public Buildings and Grounds presented the following minority report, countersigned by the Comptroller, in favor of adopting the following resolution, viz.:

WHEREAS, In the judgment of this Common Council the city should undertake the work of the disposition of garbage and dead animals within its limits, and should own and operate a plant for such purpose;

Resolved, That it is for the public interest to acquire by purchase, lease or condemnation, lands within the limits of the City of Milwaukee for the purpose of erecting thereon crematories or other works for the reduction or disposal of garbage, and operating the same.

Resolved further, That a committee, to be composed of the Mayor, City Engineer and Commissioner of Health, and five members of the Common Council, be appointed

for the purpose of examining sites and reporting thereon to the said Common Council, pursuant to the provisions of Chapter 288 of the Laws of Wisconsin for 1897.

Ald. Doelger presented the following "Majority Report":

To the Honorable the Common Council:

Gentlemen—The majority of your Committees on Finance, Health and Public Buildings and Grounds recommends that the resolution to advertise for a site for a municipal garbage plant be indefinitely postponed.

Ald. Renning, from the Committees on Finance, Health and Public Buildings and Grounds, presented the following minority report, countersigned by the Comptroller, in favor of adopting the following resolution, viz.:

Resolved, By the Common Council of the City of Milwaukee, That the Board of Public Works be, and is hereby directed forthwith to advertise for proposals to lease or sell to the city a site for a garbage disposal plant within the limits of the city.

Ald. Doelger, from the Committees on Finance, Health and Public Buildings and Grounds, presented the following majority report, countersigned by the Comptroller, in favor of adopting the following resolution, viz.:

WHEREAS, On the 7th day of July, 1897, the Common Council of the City of Milwaukee duly awarded a contract for collecting, transporting and disposing of the garbage and dead animals of said city for the term of five years to John J. Crilley and James O'Donnell; and

WHEREAS, The said John J. Crilley and James O'Donnell have failed and refused to execute said contract on their part, and have been declared in default;

Resolved, By the Common Council of the City of Milwaukee, That the Board of Public Works of said city be, and is hereby instructed to immediately advertise for proposals or bids for doing the work of collecting, transporting and disposing of the garbage and dead animals of the City of Milwaukee for a period of five years from the 25th day of August, 1897, or from such date thereafter as the work of collecting and disposing of said garbage and dead

animals shall be in successful operation; each proposal or bid to state an aggregate sum per year for doing the entire work of collecting, transporting and disposing of said garbage and dead animals, and to be accompanied by such bond as will guarantee to the city the execution and fulfillment of the contract, and that within ninety days from the execution of the contract the work shall be in successful operation in case the proposal or bid is accepted. Each proposal or bid must be accompanied by a full statement by the party offering it of the manner or method in which the garbage and dead animals are to be disposed of, and must state whether the reduction plant will be located within or outside of the city limits, and no bid not containing such statements will be considered. The plans and specifications for doing such work shall be prepared by the Board of Public Works, with the assistance of the Commissioner of Health and City Attorney.

Resolved further, That all proposals or bids received be forthwith submitted to the Common Council for further action thereon, and that in such advertisement the right shall be reserved to the Common Council to determine before accepting any proposal or bid the system to be employed in the disposal of garbage and dead animals, and whether the disposal plant shall be located within or without the city limits, and to reject any or all proposals or bids.

A motion was made to amend the foregoing resolution directing the Board of Public Works to advertise for bids for disposing of the garbage, by striking out the words "five years" where they occur in the 13th and 14th lines of said resolution, and inserting in lieu thereof, the words "one year," and by striking out the words "per year," where the same occur in the 17th line of said resolution.

Ald. Renning presented the following "Minority Report":

To the Honorable the Common Council:

Gentlemen—The (minority) of your Committees on Finance, Health and Public Buildings and Grounds recommend that the resolution directing the Board of Public Works to readvertise for bids for the disposal of garbage, be indefinitely postponed.

Upon these resolutions there was much discussion, but no action, and the whole subject was laid over until the next regular meeting of the Council, held on the 2nd day of August, 1897, when the following motion was made and carried:

Ald. Rudolph moved that all subject matter pertaining to the disposal of garbage, etc., laid over at the special meeting of July 30th, 1897, be re-referred to the Committees of Finance, Health and Public Buildings and Grounds, City Engineer, Commissioner of Health and City Attorney.

The motion prevailed by the following vote, viz.:

Ayes—Ald. Andrejewski, Breustrin, Buth, Caufy, Chase, Connelly, Dorfner, Elkhert, Grottemaat, Hill, Hyde, Jeske, Kieckhefer, Kuntz, Laffey, Luedtke, Rademaker, Ramsey, Renning, Rudolph, Schmidt, Schranck, Starke, Starkweather, Stevens, Steinmueller, Thuering, Weiher, Winkel, and the President—30.

Noes—Ald. Berg, Dietrich, Doelger, Eggert, Hanizeski, Okershauser, Oldenburg, Pawinski and Stollenwerk—9.

The whole matter relating to the disposal of garbage was then re-referred to the Committees on Finance, Health and Public Buildings and Grounds, City Engineer, Commissioner of Health and City Attorney.

At the same session an opinion was presented by the City Attorney relative to the matter of the contract, which is as follows:

OFFICE OF THE CITY ATTORNEY,
MILWAUKEE, Aug. 2, 1897.

To the Honorable the Common Council:

Gentlemen—I have carefully considered the views of Mr. Timlin, as expressed in his communication to Ald. Starke, and referred to me by your honorable body for examination. The gist of Mr. Timlin's opinion is that the Common Council, after having accepted a certain bid and adopted a certain system, may, in its discretion, upon the failure of the person whose bid has been accepted to execute the contract, rescind its action and accept the bid

of the person whom it considers the next lowest competent and reliable bidder. While I do not entirely agree with Mr. Timlin's argument, I am satisfied that the conclusions at which he arrives are in the main correct.

Section 10 of Chapter V. of the charter provides in substance that all contracts shall be awarded to the lowest bidder who shall have complied with certain requirements as to furnishing bonds, etc., and that no contract shall be entered into by the Board of Public Works unless the same shall be executed by two or more sureties for the contractor, etc. It is provided further that whenever any bidder shall, in the judgment of said Board, be incompetent or otherwise unreliable for the performance of the work for which he bids, the said Board shall report to the Common Council a schedule of all the bids for such work with the recommendation to accept the bid of the lowest competent and reliable bidder for such work, with the reasons for such recommendation, and thereupon it shall be lawful for the said Common Council to direct the said Board either to let the work to such lowest competent and reliable bidder or to relet the same anew. It is further provided that the said Board may reject the bid of any person who shall have previously willfully or negligently refused to enter into a contract with satisfactory sureties for any work or improvement that shall have been previously awarded to him by said Board.

I am of the opinion that under these provisions the award of the contract is not completed until the contract itself is finally executed in compliance with the foregoing requirements, and that until such time the Board of Public Works and Common Council retain jurisdiction over the bids. Should the Board of Public Works determine the lowest bidder to be "incompetent or otherwise unreliable for the performance of the work for which he bids," and make the report and recommendation to the Common Council contemplated in the section above referred to, the Common Council may therupon, in its discretion, direct the Board either to let the work to the lowest competent and reliable bidder or readvertise for bids. It will be noted that it is not obligatory on the Council to accept the bid of the next lowest competent and reliable bidder, but that this course is optional with it in case it should be deemed for the public interest. It is essential, however, that the report and recommendation of the Board of Public Works, provided in Section 10, above

quoted, should be submitted to the Common Council before any such disposition is made of the matter, as these are the foundation of the council's authority to act.

As the Council has determined that the plant for the disposition of the garbage shall be located within the city limits and that the so-called Holthaus system shall be employed, no bids contemplating any other location or process can be considered; nor, in the case of readvertisement, could proposals for any other location be invited, unless the action be rescinded.

Respectfully submitted,

HOWARD VAN WYCK,
City Attorney.

In response to the resolution calling for information as to whether arrangements had been made for taking care of the garbage after the expiration of the present contract, the following communication was presented:

OFFICE OF THE COMMISSIONER OF HEALTH,
MILWAUKEE, Aug. 2nd, 1897.

To the Honorable the Common Council of the City of Milwaukee:

Gentlemen—In response to your resolution dated July 28, 1897, I have the honor to report that no plan has been perfected for the collection and disposal of garbage after the expiration of the present contract, namely, Aug. 25, 1897, and for the following reason: It was assumed that the contract awarded Messrs. Crilley & Co. would be entered into, and arrangements were made with the party who was to have charge of the Crilley plant, to dispose of the garbage after the expiration of the contract now in force, and until the new plant should be ready, if the Wisconsin Rendering Co. were not prepared to continue to treat the garbage after Aug. 25.

Crilley & Co. failed to enter into a contract and thus prevented the execution of the plan above referred to.

No other plan has been perfected, and I respectfully call attention to the fact that unless the present method of collecting and disposing of garbage by the Wisconsin Rendering Co. be authorized by the action of your honorable body, it will be necessary for you to make provision for some other plan.

There are now but twenty-three days remaining before the contract with the Wisconsin Rendering Co. terminates, and immediate action is necessary to arrange for a continuance of the present method, or to perfect some other way.

Very respectfully yours,
WALTER KEMPSTER, M. D.,
Commissioner of Health.

This was referred to the Committees on Finance, Health and Public Buildings and Grounds, the City Engineer, Commissioner of Health and City Attorney.

At a subsequent meeting of the committees to which this communication was referred, the Commissioner of Health called the attention of the committee verbally to the whole situation, and urged upon them the necessity for making provision to secure the proper collection and disposal of the garbage after the contract should expire; there was discussion and many questions covering the same ground that had been gone over many times before, but no suggestions were received and no proposition was made looking to the letting of a temporary contract, or disposal in any other way

No official action of any kind was taken upon this important subject until the 9th day of August, when at a special meeting of the Common Council a report was presented, signed by a majority of the members of the committee to which it had been referred, recommending the passage of an ordinance appropriating $140,000 to pay for the purchase of land and construction thereon of a garbage plant; and at the same session a report was presented from a minority of the same committee, recommending that the above mentioned ordinance should be indefinitely postponed, but after considerable discussion the ordinance received one or two amendments, and was ordered to a third reading, and it was believed that the problem which had occupied so much of the time of the Common Council, was approaching a solution

At the same session of the Common Council the same committee, viz., finance, health and public buildings and grounds,

together with the City Attorney and Commissioner of Health, suggested the following method, which, if adopted, would relieve the city from its present anxiety and give abundant time for the proper adjustment of the subject. The following communication, with resolutions, presented the method suggested:

To the Honorable the Common Council:

Gentlemen—The (majority) of your Committees on Finance, Health and Public Buildings and Grounds, City Engineer, Commissioner of Health and City Attorney, to whom was re-referred a resolution directing the Board of Public Works to readvertise for bids for the disposal of garbage and dead animals of the city, for a period of five years, together with an amendment of Ald. Stevens, introduced at the regular meeting of the Common Council held Aug. 2, 1897, report by the accompanying substitute resolution, with the recommendation that the same be adopted.

O. T. Renning,
L. L. Caufy,
E. H. Dorfner,
C. Corcoran,
J. L. Rademaker,
W. H. Stevens,
Committee on Finance.
W. H. Starkweather,
O. T. Renning,
Henry J. Schmidt,
Committee on Health.
Gust. J. Jeske,
Elias Stollenwerk,
H. C. Schranck,
Committee on Public Buildings and Grounds.
Walter Kempster, M. D.,
Commissioner of Health.
Howard Van Wyck,
City Attorney.

Whereas, On the 7th day of July, 1897, the Common Council of the City of Milwaukee duly awarded a contract for collecting, transporting and disposing of the garbage and dead animals of said city, for the term of five years, to John J. Crilley and James O'Donnell; and

WHEREAS, The same John J. Crilley and James O'Donnell have failed and refused to execute said contract on their part, and have declared in default; therefore, be it

Resolved, By the Common Council of the City of Milwaukee, That the Board of Public Works of said city be, and is hereby instructed to immediately advertise for proposals or bids for doing the work of collecting, transporting and disposing of the garbage and dead animals of the City of Milwaukee, for a period of one year from the 25th day of August, 1897 (or from such date thereafter as the work of collecting and disposing of said garbage and dead animals shall be in successful operation), reserving the option to said city to extend such period for such additional time, not exceeding one year, as the Common Council may determine; each proposal or bid to state an aggregate sum per year for doing the entire work of collecting, transporting and disposing of said garbage and dead animals, and to be accompanied by such bond as will guarantee to the city the execution and fulfillment of the contract (and that within ninety days from the execution of the contract the work shall be in successful operation) in case the proposal or bid is adopted. Each proposal or bid must be accompanied by a full statement by the party offering it of the manner or method in which garbage or dead animals are to be disposed of, and must state whether the reduction plant will be located within or outside of the city limits, and no bid not containing such statements will be considered. The plans and specifications for doing such work shall be prepared by the Board of Public Works, with the assistance of the Commissioner of Health and City Attorney.

Resolved further, That all proposals or bids received be forthwith submitted to the Common Council for further action thereon, and that in such advertisement the right shall be reserved to the Common Council to determine, before accepting any proposal or bid, the system to be employed in the disposal of garbage and dead animals, and whether the disposal plant shall be located within or without the city limits, and to reject any and all proposals or bids.

Ald. Renning presented the following amendment to the foregoing substitute resolution:

Amend the substitute resolution by striking out the words "or from such date thereafter as the work of collect-

ing and disposing of said garbage and dead animals shall be in successful operation," in the thirteenth, fourteenth and fifteenth lines thereof, and by striking out the words "and that within ninety days from the execution of the contract work shall be in successful operation," in the twenty-first and twenty-second lines of said substitute resolution.

Ald. Doelger moved that the foregoing substitute resolution and amendment thereto, be re-referred to the joint Committees on Finance, Health and Public Buildings and Grounds, City Engineer, Commissioner of Health and City Attorney.

The motion prevailed and the report of committee with substitute resolution and amendment was re-referred to the foregoing named joint committee.

At an adjourned meeting of the Common Council held on the 12th day of August, 1897, another communication was presented from the joint committee on above motion, of which the following is a copy.

To the Honorable the Common Council:

Gentlemen—The (majority) of your Committees on Finance, Health, Public Buildings and Grounds, City Engineer, Commissioner of Health and City Attorney, to whom was referred an amendment to substitute resolution reported by above committee to your honorable body on Aug. 9th, upon resolution to readvertise for bids for the disposal of garbage, and upon Ald. Steven's resolution to amend the same, offered Aug. 2nd, having carefully considered the aforementioned amendment to the committees' former report, beg leave to recommend the substitute with the amendment offered by Ald. Renning, which report, when so amended, reads as follows:

WHEREAS, On the 7th day of July, 1897, the Common Council of the City of Milwaukee duly awarded a contract for collecting, transporting and disposing of the garbage and dead animals of said city, for the term of five years, to John J. Crilley and James O'Donnell; and

WHEREAS, The said John J. Crilley and James O'Donnell have failed and refused to execute said contract on their part, and have been declared in default; therefore, be it

Resolved, By the Common Council of the City of Milwaukee, That the Board of Public Works of said city be, and is hereby instructed to advertise immediately for proposals or bids for doing the work of collecting, transporting and disposing of the garbage and dead animals of the City of Milwaukee for a period of one year from the 25th day of August, 1897, reserving the option to said city to extend such period for such additional time, not exceeding one year, as the Common Council may determine; each proposal or bid to state an aggregate sum per year for doing the entire work of collecting, transporting and disposing of said garbage and dead animals, and to be accompanied by such bond as will guarantee to the city the execution and fulfillment of the contract in case the proposal or bid is adopted. Each proposal or bid must be accompanied by a full statement by the party offering it of the manner or method in which the garbage and dead animals are to be disposed of, and must state whether the reduction plant will be located within or without the city limits, and no bid not containing such statements will be considered. The plans and specifications for doing such work shall be prepared by the Board of Public Works, with the assistance of the Commissioner of Health and the City Attorney.

Resolved further, That all proposals or bids received be forthwith submitted to the Common Council for further action thereon, and that in such advertisement the right shall be reserved to the Common Council to determine before accepting any proposal or bid the system to be employed in the disposal of garbage and dead animals, and whether the disposal plant shall be located within or without the city limits, and to reject any and all proposals or bids.

Ald. Doelger moved that the foregoing report be laid over until later in the meeting for further action.

An effort was made to secure the adoption of the report by the Common Council at that meeting, but it failed, however, and upon the motion of Ald. Rudolph the resolutions were rereferred to the committees having the matter in charge, which motion prevailed by a large majority.

A decided effort had been openly made to rescind the resolution designating the Holthaus system as the best, and

also to rescind the resolution providing for the disposal of garbage and dead animals within the city limits, a minority of the joint committee having presented such a resolution and pressed for its passage. To prevent such action the following resolution was presented by Ald. Renning:

> *Resolved*, That a certain resolution adopted by the Common Council at an adjourned meeting held July 7, 1897, awarding the contract to Messrs. Crilley & O'Donnell for the collection, transportation and disposal of the garbage and dead animals of the City of Milwaukee, and designating the "Holthaus" system as the best and most sanitary for the disposal of garbage and dead animals within the city limits, be, and the same is hereby rescinded.
>
> *Resolved* further, That a certain resolution adopted by the Common Council at a meeting held July 6, recommending that the garbage and dead animals of the city be disposed of within the city limits, be, and is hereby rescinded.

A minority report was presented by Ald. Doelger, as follows:

> *To the Honorable the Common Council:*
>
> Gentlemen—The minority of your joint Committee on Finance, Health, Public Buildings and Grounds, City Engineer, Commissioner of Health and City Attorney, to whom was referred the resolution to rescind resolution awarding contract for disposal of garbage to Crilley & O'Donnell, etc., have considered the same and respectfully recommend the adoption of the resolution.

No official action was taken, however, and both the majority and minority reports were again re-referred to the joint committees having the matter in charge.

It was considered necessary to press this matter to a conclusion as speedily as possible, and to accomplish this purpose a communication was addressed to the Common Council by the Mayor at this same session, the communication being as follows:

MAYOR'S OFFICE,
MILWAUKEE, Aug. 12th, 1897.

To the Honorable the Common Council:

Gentlemen—In bringing about a settlement of the garbage disposal question, I desire to call your attention to the fact that the State Legislature will convene in a few days, and I would recommend that your honorable body address a memorial to the State Legislature, explaining the condition and circumstances here existing and asking them to assist the city by enacting a law which makes it mandatory to all cities of the first-class in this state to issue bonds, by a majority vote of all members-elect of the Common Council for the purpose of purchasing sites, building garbage plants and equipping the same from the proceeds of such bond sale. The amount of such bond issue should be specified, and I am of the opinion that it should not exceed $120,000. I can see no reason if the present state of affairs be properly explained to the members of the Legislature, why they should not act favorably on your petition. You could then pass a bond ordinance and build a municipal plant. This, in my opinion would obviate a re-occurrence of such troubles as we are now, and have been experiencing for nearly a year, and would secure to the city a system of garbage disposal where the collection as well as the disposal would be done in an absolutely sanitary manner. A large majority of our citizens favor the erection of a municipal garbage plant, believing that they would receive better service, and that it is a poor business principle to pay for a new plant every five years or whenever a new garbage contract is let.

Respectfully submitted,
W. G. RAUSCHENBERGER,
Mayor.

The date upon which the contract with the Wisconsin Rendering Company would expire was now close at hand, and that the Common Council and other officials might be prepared to make a final settlement of the city's indebtedness the Commissioner of Health presented a communication to the Common Council at a meeting of that body, held on Aug. 16, 1897, as follows:

OFFICE OF THE COMMISSIONER OF HEALTH,
MILWAUKEE, Aug. 16, 1897.

To the Honorable the Common Council of the City of Milwaukee:

Gentlemen—I have the honor to call your attention to the following:

It has been stipulated that the contract between the City of Milwaukee and the Wisconsin Rendering Company terminates on the 25th day of August, 1897.

The contract was for the period of five years; this being the case the contract must have commenced Aug. 25, 1892.

A clause in the contract reads as follows: "It is further mutually agreed by and between the parties hereto that the said party of the second part shall pay to the said party of the first part, in equal monthly installments, on certificates of the Commissioner of Health of said city, as compensation for the collecting and transporting of said slops, offal, garbage, dead animals and animal matter, as hereinbefore set forth, the sum of forty-three thousand ($43,000) dollars per year for a term of five (5) years, the payment to be made hereunder one month after said plant shall be in successful operation to the satisfaction of the Mayor and Commissioner of Health of the said city."

And, furthermore, the contract provides that, "One month after the said plant shall be put in successful operation to the satisfaction of the Mayor and Commissioner of Health of said city, the following sums per annum would be paid, $25,000 for the first year, $27,000 for the second year, and so on, an additional $2,000 per year until the end of said term."

It appears from the records that the $2,000 increase for each year has been adjusted so that payments commenced from and after the 25th day of June annually instead of on and after the 25th day of August, so that the increase has been anticipated two months in each year, and they have therefore received $1,333.10 in excess of the sum called for under the provisions of the contract, as is more clearly shown in the account hereunto attached.

Your attention is also called to bills of Mr. Rostad and Mr. Nimmer, hitherto presented, and the two bills herewith transmitted for the construction of the bar-gate authorized by your honorable body under a resolution adopted on the 12th day of October, 1896, and I would respectfully call attention to the fact that the sum of

$2,000, withheld from the Wisconsin Rendering Company by a resolution of the Common Council adopted Oct. 12, 1896, has not yet been collected by the Wisconsin Rendering Company.

All of which is respectfully submitted,

WALTER KEMPSTER, M. D.,
Commissioner of Health.

Amount paid to Wisconsin Rendering Company:

From June 25, 1892, to June 25, 1893	$67,999.92
June 25, 1893, to June 25, 1894	69,999.96
June 25, 1894, to June 25, 1895	72,000,00
June 25, 1895, to June 25, 1896	73,999,92
June 25, 1896, to June 25, 1897	75,999.96
June 25, 1897, to Aug. 25, 1897	12,666.66
	$372,666.42

Amount that should have been paid to the Wisconsin Rendering Company:

June 25, to Aug. 25, 1892	$11,333,32
Aug. 25, 1892, to Aug. 25, 1893	68,000.00
	70,000.00
	72,000.00
	74,000.00
	76,000.00
	$371,333.32
	$372,666.42
	371,333.32
	$1,333.10
	$25.54
Bill of H. Nimmer	12.23
Bill of C. Lammert, making gate	11.51
Bill of C. Lammert, putting up gate at Mequon	11.50
	$1,393.88

This communication was, as is usual, referred to the Committee on Judiciary, Health and City Attorney.

No other action was taken on this urgent matter at this session, although at a meeting of the joint committee at a preceding session the Commissioner of Health then urged upon the

committee the necessity of action on that day, that some provisions should be made by the Common Council for the performance of this important work, and the commissioner announced to the committee at that meeting that unless some provision was then made for doing the work the Commissioner of Health would be required to do the work himself without a contract, under the provisions of the first six sections of Chapter 13, of the city charter.

Certain members of the committee questioned the authority of the commissioner to take such action, and the committee sent for the City Attorney to appear before them, who stated that not only was it the duty of the Commissioner of Health to do the work, but that the sections referred to above in the city charter compelled him so to do, that the sections referred to were mandatory, and that if he did not remove the garbage and dead animals from the city he would be liable to punishment for non-performance of a duty made compulsory by these sections, and that in the absence of any action taken by the Common Council providing for the collection and disposal of this material, it was incumbent upon the Commissioner of Health to do this work, and that it must be performed through him to the best of his ability, and that the city would be liable for the payment of all expenses incurred in the performance of his work. Notwithstanding the statement of the City Attorney and the appeal of the Commissioner of Health requesting that some suggestion be made for its removal before the contract should expire, the committee adjourned without taking action and without making any suggestion which had been asked by the commissioner repeatedly.

There were to be no further sessions, either of the committee above referred to, or of the Common Council, until after the contract with the Wisconsin Rendering Company should expire on the 25th day of August; and the Commissioner of

Health immediately began investigations as to the best way to dispose of the material after the contract should expire.

Arrangements were made with farmers living in adjoining towns to permit the garbage to be buried on lands owned by them, the Health Department doing all of the work itself in order that there might be no complaint made as to the method employed

This method was to plough a deep trench with ploughs specially arranged for the purpose, the garbage then scattered in the furrows in such a way that the furrow next turned would completely bury the garbage thus distributed in the trench; and to make the work still more complete men with shovels were employed to follow the plough, and if any of the material could be seen through crevices in the earth they were required to throw loose dirt thereon, so that there should be at all places at least three inches of dirt on the top of the buried garbage, and the arrangements were conducted so that the garbage collected was buried completely before sun-down of the day upon which it was collected.

Wagons were employed, so arranged that kerosene oil barrels to the number of fifteen or seventeen could be carried on a rack, the barrels being provided with close fitting covers, and drawn by two horses. These were assigned to the work of collection in the central parts of the city where the largest quantity of garbage was to be found, and in the outlying districts one-horse wagons were employed to do this work. The whole arrangements were completed, so that on the afternoon of the day on which the contract expired, viz., the 25th day of August, 1897, the work was commenced under the oversight of the Health department. A supervisor was employed with a number of inspectors to see that the work was properly done, and for the first week an enormous quantity of foul, decaying vegetable matter was found accumulated in all parts of the city. Notwithstanding many annoying incidents, some of which appeared to have been brought about by parties who certainly had not the interests of the city at heart, the work

was carried forward, the city cleared of the accumulated putrescent garbage, all of which was done as above described.

Arrangements were made with parties to remove the dead animals, they to be disposed of finally at a rendering establishment located in the Town of Wauwatosa, where the work was continued for some time under the supervision of officers connected with the Health Department, and where it was done in a cleanly, sanitary manner. Notwithstanding the difficulties presenting themselves from time to time and the brief period there was in which to perfect arrangements, the work was done at a less cost per month than under the old contract.

From time to time injunctions and other legal proceedings were taken to prevent the burial of the garbage on farm lands adjacent to the city, also to restrain the rendering works in Wauwatosa from disposing of dead animals, but when the subject matter was investigated by the courts having jurisdiction, it was found that there was no ground for injunctional proceedings, and that the work was being done in a proper manner, but the prejudices of a few people created a clamor, and continual interruptions were made, first by one and then by another, each, however, being set aside when an investigation was made and testimony taken in the courts having jurisdiction.

The most bitter opposition was made to this method of doing the work by parties who lived miles away from where the work was being done; those parties living nearest the grounds upon which the garbage was buried made no complaint that any disagreeable consequences resulted from the disposal of material as above described; and at a trial held to inquire into the whole subject, farmers and others testified that the odors arising from the methods controlled by the Health Department did not create as much discomfort as the use of stable manure, and that there was a great demand among the market gardeners adjacent to the city for this material, which

they wanted to use as a fertilizer, but to which some of their town officials objected strenously, and prevented them from receiving this material which they so much needed.

Notwithstanding the factious and persistent opposition, the work was carried on as described. During the winter months when the ground was frozen so that the plough could not be used, men were employed with picks to remove the frozen crust and the garbage deposited in the trench as before, to be covered by the earth removed from the next trench.

To test the efficacy of this plan investigations were made during one of the trials above mentioned to determine in what condition the garbage was found which had been buried during the preceding summer, and a party was sent to the farm where the first foul garbage had been buried; the earth was removed at several places, and the garbage found to be entirely destroyed, except here or there where a corn-cob, or similar hard fibred material, naturally resisted the destructive process longer than the lighter material; and where the earth was thus removed as described, there was not the faintest odor, the garbage which had been deposited in the trenches was now represented by a thin layer of black material entirely decomposed and odorless.

After the system above described had been incorporated and the men accustomed to perform the work assigned, complaints from citizens for non-collection of garbage became fewer and fewer. An order was issued providing that when the collector failed to perform his duty in a proper manner he was fined twenty-five cents for every offense. This caused the collectors to look sharply for the garbage that their earnings might not be reduced by fines, and so far as collection is concerned, it has been more perfect under the methods above detailed than ever before since my connction with the department.

These arrangements were all perfected so that on the morning of the 26th of August, the collections were made,

and the work commenced without any unpleasant jar between the time of the expiration of the contract and the assumption of the work by the Health Department made necessary because of the lack of provision which should have been made by the Common Council, although there were but eight days in which to make preparation.

At a meeting of the Common Council held on the 13th of September, 1897, majority and minority reports were once more presented, as follows:

To the Honorable the Common Council:

Gentlemen—The majority of your Committees on Finance, Health and Public Buildings and Grounds, to which was referred resolution affirming to be for the public interest to acquire lands within the limits of the City of Milwaukee for the purpose of erecting thereon crematories or other works for the reduction of garbage, and directing the appointment of a special committee composed of the Mayor, City Engineer and Commissioner of Health and five members of the Common Council, for the purpose of examining and reporting such sites to the Common Council, have carefully considered the same in connection with the provisions of Chapter 288 of the Laws of Wisconsin for 1897.

The majority of your committee would emphasize the fact that the resolution authorizing the appointment of a special committee is in strict accordance with the law referred to and that in no other way, except by such committee appointed for the special purpose as directed in Chapter 288, can action be legally taken on the matter by this Common Council.

The majority of your committee refers to the letter of the law which determines the authority of the committee and its form of creation; so that no error may be made in these proceedings, the law states that whenever the Common Council of such city shall by ordinance or resolution, duly adopted by a majority of all aldermen-elect of such city, declare it to be for the public interest to acquire such lands by lease, purchase, etc., a committee of said Council or of the city's officers as such Common Council by said ordinance or resolution shall direct, shall be appointed for the purpose of examining sites and report thereon to the Common Council.

In view of the fact that such provision unmistakably requires the appointment of a committee for this particular purpose, we are at a loss to understand the objections of the minority, who desire to refer this matter to a standing committee, the result of which would be to render invalid and illegal, and subject to litigation, any of the proceedings based upon the same and following the adoption of such report.

We, therefore, recommend the resolution referred to this committee for adoption without change.

This majority report was introduced by Ald. Renning, who also introduced the following resolution mentioned in the report:

WHEREAS, In the judgment of this Common Council the city should undertake the work of the disposition of garbage and dead animals within its limits, and should own and operate a plant for such purpose;

Resolved, That it is for the public interest to acquire by purchase, lease or condemnation, lands within the limits of the City of Milwaukee, for the purpose of erecting thereon crematories or other works for the reduction or disposal of garbage, and operating the same.

Resolved further, That a committee, to be composed of the Mayor, City Engineer and Commissioner of Health, and five members of the Common Council, be appointed for the purpose of examining sites and reporting thereon to the said Common Council, pursuant to the provisions of Chapter 288 of the Laws of Wisconsin for 1897.

The following minority report was presented by Ald. Doelger with the accompanying resolution:

To the Honorable the Common Council:

Gentlemen—The minority of your Committees on Finance, Health and Public Buildings and Grounds have carefully considered the resolution referred to this committee, declaring that it is for the public interest to acquire lands within the limits of the City of Milwaukee for the erection thereon of crematories or garbage disposal works, and authorizing the appointment of a special committee for the purpose of examining sites and reporting thereon to the Common Council.

In the judgment of the minority of your committee the resolution authorizing the appointment of a special com-

mittee should be amended or a substitute therefor adopted which shall refer this whole matter to the Committee on Public Buildings and Grounds, as the nature of the subject would seem to require.

We therefore offer the accompanying substitute resolution with the recommendation that the same be adopted:

WHEREAS, In the judgment of the Common Council, the city should undertake the work of the disposition of garbage and dead animals within the limits, and should own and operate a plant for such purpose.

Resolved, That it is for the public interest to acquire by purchase, lease or condemnation, lands within the limits of the City of Milwaukee, for the purpose of erecting thereon crematories or other works for the reduction or disposal of garbage, and operating the same

Resolved further, that the Committee on Public Buildings and Grounds, in connection with the Mayor, City Engineer and Commissioner of Health, be appointed for the purpose of examining sites and reporting thereon to the said Common Council.

On these reports and resolutions there was much discussion, and several votes, and as a result the report and resolution of the majority was adopted, and a committee was appointed in accordance with the resolution, consisting of the following persons: His Honor, the Mayor, W. G. Rauschenberger; City Engineer, Geo. H. Benzenberg; Commissioner of Health, Walter Kempster; Ald. Stevens, Jeske, Luedtke, Renning and Schranck.

Ald. Renning then presented the following:

To the Honorable the Common Council:

Gentlemen—The (majority) of your Committees on Finance, Public Buildings and Grounds, City Engineer and Commissioner of Health, to whom was re-referred resolution directing the Board of Public Works to advertise for proposals to lease or sell to the city a site for

garbage disposal plant, recommends that the same be adopted.

Respectfully,

O. T. RENNING,
J. L. RADEMAKER,
E. H. DORFNER,
W. H. STEVENS,
J. L. CAUFY,
WM. A. STARKE,
Committee on Finance.

W. H. STARKWEATHER,
O. T. RENNING,
HENRY J. SCHMIDT,
Committee on Health.

GUST. J. JESKE,
H. C. SCHRANCK,
ELIAS STOLLENWERK,
Committee on Public Buildings and Grounds.

GEO. H. BENZENBERG,
City Engineer.

A. B. MAY,
Assistant City Attorney.

Countersigned, Sept. 13, 1897,

WM. J. FIEBRANTZ,
Comptroller.

The following is the resolution referred to in the foregoing report:

Resolved, By the Common Council of the City of Milwaukee, That the Board of Public Works be, and is hereby directed forthwith to advertise for proposals to lease or sell to the city a site for a garbage disposal plant within the limits of the city.

Ald. Doelger moved that separate action be taken on foregoing report and resolution.

The report was then laid aside for separate action.

Ald. Renning presented the following:

MILWAUKEE, Sept. 13, 1897.

To the Honorable the Common Council:

Gentlemen—The (majority) of your Committees on Finance, Health and Public Buildings and Grounds, City

Engineer, City Attorney and Commissioner of Health, to whom was re-referred resolution directing the City Engineer to have suitable specifications for building a garbage disposal plant prepared, and directing the Board of Public Works to advertise for bids to erect said buildings, would recommend that the same be adopted.

O. T. RENNING,
J. L. RADEMAKER,
E. H. DORFNER,
W. H. STEVENS,
J. L. CAUFY,
WM. A. STARKE,
Committee on Finance.

W. H. STARKWEATHER,
O. T. RENNING,
HENRY J. SCHMIDT,
Committee on Health.

GUST. J. JESKE,
H. C. SCHRANCK,
ELIAS STOLLENWERK,
Committee on Public Buildings and Grounds.

GEO. H. BENZENBERG,
City Engineer.

A. B. MAY,
Assistant City Attorney.

Countersigned, Sept. 13, 1897,

WM. J. FIEBRANTZ,
Comptroller.

The following is the resolution referred to in the foregoing report:

Resolved, By the Common Council of the City of Milwaukee, That the City Engineer be, and he is hereby directed forthwith to prepare the necessary plans and specifications for the erection of a building and the necessary foundations for machinery, etc., for the disposition of the garbage and dead animals of the city.

Resolved further, That the Board of Public Works be, and is hereby directed, immediately upon the completion of such plans and specifications, to advertise pursuant to law for proposals or bids to erect and construct said building and foundations according to such plans and specifications.

Ald. Doelger moved that separate action be taken on foregoing report and resolution.

The report was then laid aside for separate action.

Ald. Renning presented the following:

MILWAUKEE, Sept. 13, 1897.

To the Honorable the Common Council:

Gentlemen—The (majority) of your Committees on Finance, Health, Public Buildings and Grounds, City Engineer City Attorney and Commissioner of Health, to whom was referred resolution directing the Board of Public Works to advertise for machinery and apparatus for garbage plant, recommend that the same be adopted.

Respectfully,

O. T. RENNING,
J. L. RADEMAKER,
E. H. DORFNER,
W. H. STEVENS,
J. L. CAUFY,
WM. A. STARKE,
Committee on Finance.

W. H. STARKWEATHER,
O. T. RENNING,
HENRY J. SCHMIDT,
Committee on Health.

GUST. J. JESKE,
H. C. SCHRANCK,
ELIAS STOLLENWERK,
Committee on Public Buildings and Grounds.

GEO. H. BENZENBERG,
City Engineer.

A. B. MAY,
Assistant City Attorney.

Countersigned, Sept. 13, 1897,

WM. J. FIEBRANTZ,
Comptroller.

The following is the resolution referred to in foregoing report.

Resolved, By the Common Council of the City of Milwaukee, That the Board of Public Works be, and it is hereby directed to forthwith prepare the necessary specifications and advertise pursuant to law for proposals or

bids to furnish to said city and set up ready for operation all necessary machinery and apparatus for the complete and sanitary disposition, either by reduction, conversion or consumption of all garbage and dead animals within the limits of said city, together with the right to use and operate the same in case of patents thereon. Each proposal or bid must state fully the manner or method in which said garbage and dead animals are disposed of by the machinery and apparatus offered and the length of time and cities in which said machinery is or has been in operation, and all proposals or bids not containing such statements will not be considered; and the said Common Council hereby expressly reserves to itself the right before accepting any proposal or bid to determine which method or system for the disposal of garbage and dead animals shall be selected. Each proposal or bid must also be accompanied by such bond, the penalty thereof to be determined by said Board of Public Works, as will guarantee to the city the execution and fulfillment of the contract, and that within ninety days from the execution of the contract such machinery and apparatus shall be furnished and set up complete and ready for use; and said contract when executed, in addition to all other provisions, must require the contractor to guarantee the machinery and apparatus furnished to dispose of the garbage and dead animals in an inoffensive and sanitary manner, and that no payment shall be made thereon until after the operation thereof shall be approved by the Mayor, City Engineer and Commissioner of Health. All proposals or bids received must be forthwith submitted to said Common Council for action thereon; and the right be reserved to said Common Council to reject any and all proposals or bids received.

Ald. Doelger moved that separate action be taken on foregoing report and resolution, and the report was then laid over for separate action.

The chair then put the question, "Shall the report of Committees on Finance, Health, Public Buildings and Grounds, City Engineer and City Attorney be approved and adopted at this time?"

The reports were then adopted by the following vote, viz.:

Ayes—Ald. Adrzejewski, Caufy, Chase, Connelly, Dorfner, Elkhert, Hanizeski, Hill, Hyde, Jeske, Luedtke, Rademaker, Renning, Rudolph, Schmidt, Schranck, Starke, Starkweather, Steinmueller, Stevens, Stollenwerk, Thiele, Thuering, Winkel and the President—25.

Noes—Ald. Berg, Buestrin, Dietrich, Doelger, Eggert, Gootematt, Kieckhefer, Kuntz, Laffey, Niezorawski, Okershauser, Ramsey and Weiher—13.

The lessened expenditures of money resulting from the method of collection and disposal employed, left a surplus which had been credited to the Health Department, and as it was not necessary to leave this money to the credit of the department when it was so much needed elsewhere, the commissioner addressed a communication to the Common Council which was presented on the 27th day of September, 1897, as follows:

OFFICE OF THE COMMISSIONER OF HEALTH,
MILWAUKEE, Sept. 27, 1897.

To the Honorable the Common Council of the City of Milwaukee:

Gentlemen—I have to advise your honorable body that, notwithstanding the expenses incurred in purchasing barrels and a suitable wagon for the collection of dead animals, with other incidental expenses relating to the collection of garbage, I can recommend to your honorable body that the appropriation made for the use of the Health Department may be decreased to the extent of the sum of $12,000 at this time, and I would respectfully submit the following resolution to your honorable body;

Resolved, That the amount appropriated and set apart for the Health Department in the budget adopted Jan. 18, 1897, and amended May 10, 1897, be, and the same is hereby decreased twelve thousand dollars ($12,000.)

Respectfully submitted,
WALTER KEMPSTER, M. D.,
Commissioner of Health.

Upon motion the rules were suspended and the resolution adopted by the following vote, viz.:

Ayes, 39; noes, 0.

Considerable skepticism was manifested by several parties as to the exact cost to the city of the work performed, which has been above described, and a resolution was introduced on the 27th day of September, as follows:

By Ald. Ramsey:

Resolved, That the Commissioner of Health be, and is hereby directed to report to this council at its next regular meeting the exact and detailed cost of the collection and disposition of garbage from Aug. 25, 1897, to Sept. 25, 1897, inclusive.

Upon motion the rules were suspended and the resolution adopted.

At the next regular meeting of the Council the resolution was replied to by the following communication:

OFFICE OF THE COMMISSIONER OF HEALTH,
MILWAUKEE, Oct. 11th, 1897.

To the Honorable the Common Council of the City of Milwaukee:

Gentlemen—In response to the resolution adopted by your honorable body on the 27th day of September, 1897, I have the honor to report that "the exact and detailed cost of the collection of garbage from Aug. 25, 1897, to Sept. 25, 1897, inclusive," was as follows:

1st.	Pay roll presented to the Honorable Council on Sept. 27, 1897	$4,727.27
2nd.	Sundry bills presented to the Honorable Council on Oct. 11, 1897	1,037.27
	Outstanding indebtedness	12.50
	Total	$5,777.04

The figures above mentioned include also the collection and disposal of all dead animals in addition to the garbage. It should be observed that the sum of $989.50 was expended for the purchase of a wagon in which to collect and transport dead animals, and for barrels in which to collect the garbage; so that the actual total cost for collection, transportation and disposal of all garbage and dead animals from the City of Milwaukee for the period above

mentioned was $4,787.54. All of which is respectfully submitted,

WALTER KEMPSTER, M. D.,
Commissioner of Health.

A second request was made for a statement in detail, giving the expenses of the work performed under the direction of the Health Department, which was presented at the meeting of the Council held on the 8th of November, and is as follows:

OFFICE OF THE COMMISSIONER OF HEALTH,
MILWAUKEE, WIS., Nov. 8, 1897.

To the Honorable the Common Council of the City of Milwaukee:

Gentlemen—I have the honor to transmit herewith a detailed statement of the cost of collection and disposition of garbage from Aug. 25, 1897, to Sept. 25, 1897, inclusive, in accordance with the request made by the Committee on Health, and adopted by your honorable body, dated Oct. 25, 1897.

To comply with the request made by your honorable body, it has been necessary to deduct five days' time from the second pay roll and add the sum deducted from the second pay roll to the sum of the first pay roll.

These five days deducted from the second pay roll, together with the first month's salary of the Superintendent of collection, not due at the time the first pay roll was made, amounted to $1,227.36.

So that the statement requested by your honorable body stands thus:

First pay roll	$4,400.77
Five days from the second pay roll already presented	1,227.36
Total	$5,632.13

The $1,227.36 added to the first pay roll must be deducted from the second pay roll, leaving the total of the second roll only $3,572.83, instead of $4,800.19.

All of which is respectfully submitted,

WALTER KEMPSTER, M. D.,
Commissioner of Health.

Recapitulation of expense for collecting of garbage from Aug. 26 to Sept. 25, 1897, inclusive, as per request of the Committee on Health, dated Oct. 25, 1897:

Total expense for collecting and disposing of garbage from Aug. 26 to Sept. 20, as per corrected bill presented to the Common Council	$4,404.77
From Sept. 21 to Sept. 25, inclusive	1,227.36
	$5,632.13
Expense from Sept. 26 to Oct. 20, as per bill pending, less $1,227.36, the five days deducted from the preceding month to fill requirements of resolution of the Common Council, dated Oct. 25, 1897	$3,572.83

Total expense for collecting and disposing of garbage from Aug. 26 to Sept. 25, inclusive:

J. O'Donnell	$81.00
J. O'Donnell	81.00
J. O'Donnell	81.00
J. O'Donnell	81.00
W. Gutknecht	78.00
W. Gutknecht	75.00
J. Maciollk	66.00
W. J. Sutton	81.00
W. J. Sutton	81.00
J. Guerin	3.00
C. Cook	78.00
M. Heiden	15.00
F. Burnelister	81.00
W. Miller	48.00
B. Welsh	78.00
B. Welsh	78.00
P. Schubert	24.00
N. Decker	81.00
P. J. Shea	54.00
C. Zube	78.00
Mrs. Palmer	6.00
E. Herbst	72.00
F. Wholcolm	57.00
Mrs. Driscoll	6.00
M. Jaka	38.00
L. Schultz	54.00
A. Lembke	54.00
C. Hoacha	54.00
A. Krieger	47.00
A. Krieger	48.00

W. Haight	54.00
W. Miller	54.00
E. Nicker	51.00
W. Ferber	48.00
C. Krieger	54.00
C. Zimmerman	46.00
C. Klatt	54.00
A. Schultz	54.00
J. Canetz	54.00
W. Smith	54.00
C. Hilgendorf	54.00
A. Fietboehl	54.00
C. Willerd	48.00
F. Rambow	52.00
A. Hewer	54.00
A. Balfance	47.00
W. Segar	54.00
C. Peters	54.00
A. Timm	52.00
J. Moldhauer	48.00
H. Marchel	50.00
J. Hoeppner	48.00
H. Swama	50.00
A. Uminas	54.00
H. Miller	54.00
C. Jens	54.00
S. Kobenski	40.00
J. Lofy	54.00
F. Schunck	53.00
F. Kroaning	51.00
A. Kufahl	54.00
J. J. Siewert	54.00
H. Brant	52.00
A. Puck	54.00
F. Schneider	48.00
M. Miller	54.00
F. Monska	54.00
F. Chestnut	52.00
F. Frank	54.00
J. Lende	54.00
F. Voss	4.00
P. O. Jacobson	2.00
C. Urbin	44.00
A. Dorn	27.00
F. Mann	8.70

A. Smith	27.00
F. Oakleng	27.00
W. Knott	26.70
J. Welfleng	13.20
F. Wolfgram	15.50
F. Hickman	26.00
J. Doss	24.00
W. Tesch	15.00
C. Wulff	59.94
J. Schulz	57.72
A. Hoffman	57.72
W. O'Donnell	81.00
M. Cannon	81.00
J. Barry	9.00
M. O'Donnell	54.00
F. Zearek	6.25
G. Strohmeyer	6.25
J. Rock	32.50
J. Setmanski	21.75
C. Swanson	28.75
J. Burke	33.75
A. Kaczmack	31.25
D. J. Holmes	32.50
E. Hannan	11.25
C. Mueller	26.25
J. Kodrofski	8.75
J. Balcarrock	13.75
H. Vanhmen	32.50
C. Redline	17.50
G. Farby	30.00
S. Jabinski	32.50
S. Balcarrock	32.50
F. Jaeger	23.75
E. Reidy	1.25
E. Otto	25.00
C. Rohion	1.25
H. Minka	33.75
P. Gersch	1.25
A. Wunck	1.25
F. Steinard	18.75
F. Tegan	3.75
C. Tetclaff	5.00
S. Zirminski	.65
A. Jonorski	2.50
J. Abeling	8.75

M. Gielens	3.75
A. Mueller	54.00
C. Schaeffer	150.00
C. Shaeffer	40.00
F. Engle	100.00
J. O'Donnell	200.00
	$5,632.13

Referred to the Committee on Health and Commissioner of Health.

No other action was taken with a view to arranging for the collection and disposal of garbage until a special meeting of the Common Council, held on the 30th day of December, 1897, when the following report and resolutions were introduced by Ald. Doelger after the clerk had read the following call for the meeting:

OFFICE OF THE CITY CLERK,
MILWAUKEE, Dec. 29, 1897.

Dear Sir—You are respectfully requested to attend a special meeting of the Common Council to be held in the Council Chamber on Thursday next, the 30th day of December, at 8 o'clock P. M.,to receive and act upon report of the Committees on Health and Judiciary on a resolution awarding contract to Messrs. Cooper & Burke for the disposal of the garbage and dead animals of the City of Milwaukee for the ensuing five years, and also a resolution to rescind resolution determining that the "Holthaus" system is the best and most sanitary for the disposal of garbage within the city limits

Ald. Doelger, from the Committees on Health and Judiciary and Commissioner of Health, presented a report in favor of adopting the following resolution, viz:

Resolved, By the Common Council of the City of Milwaukee, That so much of a resolution adopted by the Common Council at an adjourned meeting held July 7, recommending the "Holthaus" system as the most sanitary for the disposal of garbage and dead animals within the city limits, be and the same is hereby rescinded.

Ald. Doelger, from the Committee on Health and Judiciary and Commissioner of Health, presented a report, countersigned by the Comptroller, in favor of adopting the following resolution, viz.:

> WHEREAS, On the 7th day of July, the Common Council of the City of Milwaukee duly awarded a contract for collecting, transporting and disposing of the garbage and dead animals of the said city, for the term of five years, to John J. Crilley and James O'Donnell; and,
>
> WHEREAS, The said John J. Crilley and James O'Don nell have failed and refused to execute said contract on their part, and have been declared in default; therefore, be it
>
> *Resolved*, That the Board of Public Works be and is hereby authorized to enter into a contract, in accordance with the provisions of the notice to bidders and specifications on file, for the collection, transportation and disposal of the garbage and dead animals of the City of Milwaukee, to the next lowest bidders, Messrs. Cooper and Burke, for a period of five years, from and after ninety (90) days after the date of execution of contract, or if the plant for the reduction of said garbage and dead animals shall be completed and in successful operation within said ninety days, then from the date when such plant shall be so completed and successfully operated, for the sum of three hundred thousand dollars ($300,000.00) for the entire five years, as per their bid submitted to the Common Council on May 24, 1897.

Upon motion of Ald. Renning the foregoing resolution was laid over until the next regular meeting.

Ald. Starkweather presented the following "Minority Report":

> *To the Honorable the Common Council:*
>
> Gentlemen—The minority of your committees on Health and Judiciary, to which was referred resolution to rescind resolution adopted by this body selecting and approving of the "Holthaus" system for the disposition of garbage in this city, and also a resolution to let the contract for the disposal of garbage and dead animals to the next lowest bidders, Messrs. Cooper and Burke, beg leave to report as follows:

The committee has not been able to avail itself of information and advice of the Commissioner of Health on account of his enforced absence through sickness; and our deliberations in the absence of very important information as to present cost, and other matters, have not enabled us to arrive at a favorable decision upon the resolutions referred. The decision to let the contract to Messrs. Cooper & Burke very naturally carries the recision of the act of the Council restricting the method of garbage disposal to the "Holthaus" system, and would therefore be necessary to give force to any resolution awarding the contract to the parties named. As the leading question, therefore, is still; What course would best serve the interests of the city—which is purely economical; and as the undersigned are emphatically of the opinion that a much cheaper and still more satisfactory contract or method for the disposition of garbage is within reach if the proper steps are taken, we are heartily in favor of taking further time for the consideration of the resolution.

The committee understands that recent action adverse to the use of the system proposed to be used by Messrs. Cooper & Burke has been taken in New York—a fact deserving some attention before the awarding of a contract using that system.

It must further be noted, in support of a brief extension of time, that the City Comptroller is about to submit his annual budget, and the question of apportionment of funds for the disposition of the garbage and the maintenance of the Health Department is essentially involved in the letting of any contract to be paid out of the funds of 1898.

Under these circumstances, therefore, we respectfully request that the whole matter be re-referred to the committees for further consideration.

The foregoing report states that the resolution was introduced as coming from the Committee on Health, Judiciary and Commissioner of Health. The Commissioner of Health states that he was never consulted in any manner concerning this report, nor was he called upon to express any opinion, or to attend any meeting of the joint committee which had these reports and resolutions under consideration. On reading the report and the resolutions the inference is clear that the Com-

missioner of Health was in favor of rescinding the resolution declaring the Holthaus system the most sanitary, and that he was also in favor of awarding the contract to Messrs. Cooper & Burke. Neither of these propositions are correct. From the time that the special committee made report after personal examination of the several garbage plants mentioned therein, there has never been any doubt in the mind of the commissioner as to the best plant for the city, which is the so-called Holthaus, and so far as his personal opinion is concerned, he is now, and has since the date of the report of the special committee, been in favor of the so-called Holthaus apparatus, because it is the most sanitary apparatus the committee saw during their investigations, and for the further reason that the proposal made for the contract under this system is $26,000 less than the proposal made by those who expected to make use of the co-called Arnold process. Furthermore, the report and resolutions above referred to, whether intentional or not, clearly indicate that the Commissioner of Health had changed his opinion as to the system, which is the most important matter, but this is not correct, and the commissioner is as firmly impressed to-day as he was on the day when he signed the report drawn by the special committee, that the Holthaus system is "the most satisfactory and sanitary garbage reduction plant which we saw in operation."

The statements above made are emphasized by the circumstance that when the annual budget was prepared incorporating the expenses of the Health Department for the ensuing fiscal year (1898), the following communication was presented with it:

OFFICE OF THE COMMISSIONER OF HEALTH,
MILWAUKEE, Jan. 3rd, 1898.

To the Honorable the Common Council of the City of Milwaukee:

Gentlemen—I have the honor to report that in the budget, setting forth the requirements of the Health De-

partment for the year 1898, I asked for $125,000, which includes a sum of money to which I desire to call your attention in a particular manner.

In setting forth our needs it is but justice to state that the work of the department has been materially increased in more than one of its sections during the year 1897, and good results have been made manifest in the lessened death rate, particularly among children under one year of age. This work should not be hampered by lack of the small sum necessary to secure still further benefits; the subject to which I desire to call your attention especially is that the Health Department has been compelled to collect and dispose of all the garbage and dead animals since the expiration of the contract of the Wisconsin Rendering Company, viz., the 26th day of August, 1897. The complications attending the letting of a new contract, and other matters connected with the collection and disposal of garbage, more especially the decision of the Supreme Court of the State of Wisconsin, which prevented the issue of bonds, led the Commissioner of Health to make a careful review of the whole subject, and he begs leave to submit the following statement concerning the matter

There has been a steady decline in the cost of collection and disposal of garbage since the first month, for reasons not necessary to state here, and it may be safely predicted that the cost of collection and disposal, if continued as it is being done at this time, will not exceed the sum of $4,000 a month, and it is even safe to predict that the cost will fall below this estimate

If we were not required to haul the garbage into the country and plough it under, distributing the garbage from each wagon in a ploughed furrow across ploughed fields, the wagons could make more frequent trips, thus lessening the expense of collection.

If the garbage could be delivered at a central point within the city limits every team could make two or more trips each day, so that it is a conservative statement to say that the cost of collection and delivery to a central point would be lessened at least one-third, I believe it could be lessened still more, but it is safe to say it can be lessened one-third. I have therefore estimated as follows:

Cost of collecting and disposing of garbage 4 months, as it is done at present, at $3,800....$15,200
Cost of collecting and delivering to a garbage plant within the city, 8 months at $2,534 a month.. 20,272

Total cost of collection and delivery for the year..$35,472
Cost of maintaining department exclusive of collecting and disposing of garbage.....$42,000

Total cost of collecting and delivering garbage and for maintenance of department.....$77,500

This leaves the sum of $47,500 to be applied as a payment for the construction of a permanent garbage plant to be built within the city, which would be more than one half of the cost of a plant large enough to do the work properly.

Should this proposition meet with the approval of your honorable body, I have to inform you that parties stand ready to construct the building and apparatus in compliance with the specifications drawn by the Board of Public Works, and they are willing to accept as a partial payment one-half of the cost price, deferring the balance for the period of one year, or until the budget is prepared for the year 1899; and they further agree to have the plant constructed ready to treat and dispose of the garbage and dead animals four months after the signing of the contract.

In the above estimate no statement is made of the expense of running the plant during the eight months, but it is evident that the sales from grease and other products will more than defray the runnig expenses, and it is not necessary to take this detail into consideration in the annual budget.

Very respectfully yours,

WALTER KEMPSTER, M. D.,
Commissioner of Health.

When this communication was before the committee to whom it was referred, it was stated to the committee by the Commissioner of Health that the process referred to (Holthaus) could be constructed within the city, and the responsible parties mentioned, who stood ready to enter into contract to construct the buildings and apparatus would use the Holthaus

system, and were content to accept partial payment from the city until the whole should be paid for, and that these parties were prepared to furnish the bonds required to complete the work in accordance with the specifications and contract, so that the total amount to be paid for this apparatus would not, even with the partial payments to be made, exceed in amount the sum mentioned in the budget, viz., $125,000.

After much discussion, however, it was moved "that the majority and minority reports of the Committees on Health and Judiciary, and the communication of the Commissioner of Health be laid over until the next regular meeting," which motion prevailed; and at the same meeting, after the reference above mentioned, the following resolution was introduced:

> *Resolved*, That the Board of Public Works be, and is hereby directed to advertise immediately for proposals and bids for the collection and also the disposition of the garbage and dead animals, either in the city or outside of the city limits for the ensuing five years, from the date of the adoption of this resolution; said bids to be accompanied by such bond as will guarantee the city the fulfillment of the contract in case the bids are accepted; and further, to be accompanied by full statement of the parties making such bid of the manner or method to be employed in reducing or disposing of said garbage and dead animals.
>
> *Resolved* further, That the said Board of Public Works advertise in such manner as shall enable bidders to present separate bids for the performance, respectively, of the work of collection of garbage, of transporting the same and of reducing, rendering or disposal of the same; and, further, to request persons bidding as required aforesaid, to present propositions for the turning over to the city any plant or apparatus used in the performance of the contract at such time and under such conditions as may be agreed upon by the city
>
> *Resolved* further, That the bids be submitted to the Common Council for further action.

Referred to the Committees on Judiciary and Health.

At the next regular session of the Common Council, held on the 17th of January, 1898, the reports and communication

above referred to were once more made the subject of considerable discussion, and as a result a motion was made by Ald. Doelger "that the whole matter be re-referred to the Committees on Health and Judiciary with instructions to report at the next regular meeting," and this motion prevailed.

At one of the previous sessions of the Common Council a resolution was passed directing the City Attorney to prepare an opinion concerning the powers of the Commissioner of Health relating to the collecting and disposal of garbage and dead animals, and at the session held January 31st, 1898, an opinion was read, as follows:

MILWAUKEE, Jan. 31, 1898.

To the Honorable the Common Council:

Gentlemen—Pursuant to the resolution adopted by your honorable body at its last regular meeting, requesting me to furnish a written opinion as to whether the Health Commissioner has any power or authority to enter into any contract or expend any money for the erection and operation of a garbage disposal plant, I have the honor to submit the following:

I assume that the plant referred to in this resolution is intended to be permanent and not merely temporary in its nature. The city is authorized to provide by contract or otherwise for the disposal of garbage. It is the duty of the Health Commissioner, in case of the accumulation in the city of substances producing disagreeable smells, or tending to cause sickness or disease, to cause the same to be removed, if in his opinion it should be necessary. When the city fails to provide for the disposition of the garbage, the Health Commissioner undoubtedly has the power to remove it in case he considers it necessary; but this authority is only to be exercised so long as the city does not act. The Health Commissioner has no power to make permanent provision for the disposition of garbage. That the city itself has the power to contract for and operate a garbage disposal plant can not be questioned, but the contract must be authorized and proposals invited therefor in the manner provided by the charter. It must be assumed that in the performance of a public duty imposed upon it, such as the disposal of garbage, the city will act at the earliest possible moment, and any omission to

do so is only temporary. Because the power of the Health Commissioner to remove garbage is a temporary power and can be exercised only in the event of the failure of the city to act, I am of the opinion that he cannot enter into a contract or expend any money for the construction or operation of a garbage disposal plant such as is contemplated in your resolution.

Respectfully submitted,

HOWARD VAN WYCK,
City Attorney.

The communication was followed by debate, and Ald. Rudolph asked the question why the special committee of six members of this Council, appointed some time ago to investigate the dumping garbage in the lake, had not made a report of their investigations.

Ald. Starkweather, the Chairman of said special committee, stating that owing to his sickness and spending a number of weeks in the hospital, the matter was delayed, and finally dropped.

The Common Council at this session finally adopted the annual budget, and the sum asked for to enable the municipal garbage plant to be constructed was stricken out, and the minority report concerning the sum necessary for the maintenance of the Health Department for the ensuing year was adopted.

Thereafter Ald. Doelger presented the following:

To the Honorable the Common Council:

Gentlemen—The (majority) of your Committees on Health and Judiciary, to whom was referred resolution to rescind resolution designating the "Holthaus" system as the most sanitary for garbage disposal within the city limits, recommends the adoption of the same.

Then Ald Starkweather presented the (minority) report, as follows:

To the Honorable the Common Council:

Gentlemen—The (minority) of your Committees on Health and Judiciary, to whom was referred resolution to rescind resolution designating the "Holthaus" system as

the most sanitary for garbage disposal within the city limits, recommends that the same be indefinitely postponed, and after much debate upon the subject the report and resolution rescinding the method known as the "Holthaus" system was adopted, being carried by the following vote:

Ayes—Ald. Andrzejewski, Berg, Buestrin, Buth, Corcoran, Dietrich, Doelger, Eggert, Esau, Grootemaat, Hill, Kieckhefer, Kuntz, Laffey, Luedtke, Niezorawski, Okershauser, Oldenburg, Ramsey, Rudolph, Starke, Steinmueller, Stollenwerk and Weiher—24

Noes—Ald. Caufy, Chase, Connelly, Dorfner, Elkhert, Hyde, Jeske, Renning, Schmidt, Schranck, Starkweather, Stevens, Thiele and Winkel—14.

At the same session the following majority and minority reports and resolutions were adopted:

Ald. Doelger presented the following:

To the Honorable the Common Council:

Gentlemen—The (majority) of your Committees on Health and Judiciary, to whom was referred resolution to award contract for garbage disposal to Messrs Cooper & Burke, recommends the adoption of the same.

Ald. Starkweather presented the following:

To the Honorable the Common Council:

Gentlemen—The (minority) of your Committees on Health and Judiciary, to whom was referred resolution awarding the contract to Messrs Cooper & Burke for the disposal of the garbage, recommends that the same be indefinitely postponed.

The motion was also made directing the Board of Public Works to advertise for bids for the disposal of garbage and dead animals, which motion was lost, and finally the motion to authorize letting the contract for the ensuing five years to the parties who represented the so-called Arnold method for disposal of garbage, was declared adopted, but the end of this question had not been reached, and at the session

of the Common Council held Feb. 14, 1898, a communication was presented, as follows:

MILWAUKEE, Feb. 8th, 1898.

To the Honorable the Common Council of the City of Milwaukee:

Gentlemen—I have the honor herewith to present for your consideration certain facts which I have been unable to present before this time for the reason that I did not know of the existence of a certain document, or of arrangements which had been entered into without my knowledge or my consent; and in view of the facts set forth in my affidavit herewith presented, and of the further fact that I have never by word or deed authorized or consented to a relinquishment of the bid entered into by me in good faith, I now respectfully demand that the proposal and bid for a contract to dispose of the garbage and dead animals collected within the City of Milwaukee, for the period of five (5) years, for the sum of $274,500, be awarded to me upon the terms and under the contract set forth in the specifications and contract furnished by the Board of Public Works; and I herewith announce that I now stand ready to enter into and perform all and singular the conditions set forth in the said specifications furnished by the Board of Public Works of the City of Milwaukee for doing the said work.

The proposal and bid, signed by John J. Crilley and James O'Donnell, authorizing the construction of what is known as the Holthaus plant, which was presented to your honorable body on the 24th day of May, 1897, was the lowest of all the bids presented. No action has been taken by your honorable body which discards or rejects said bid, and I therefore respectfully demand that the necessary steps may be taken forthwith to enable me to proceed with the work in accordance with the provisions set forth in the aforementioned document.

Respectfully submitted,

JAS. O'DONNELL.

STATE OF WISCONSIN, }
MILWAUKEE COUNTY. } ss.

James O'Donnell, of the City of Milwaukee and county aforesaid, first being duly sworn, deposes and says that he is a resident of the City of Milwaukee, and has been a resident in said city for about fifty years last past; that his

place of residence is No. 1326 Clybourn Street, Milwaukee; that on the 22nd day of May, 1897, in company with one John J. Crilley, of the City and County of Milwaukee, they jointly and severally submitted to the Board of Public Works of the City of Milwaukee a proposal or bid, made in accordance with specifications approved by said Board of Public Works, to collect and dispose of all garbage and dead animals collected in the City of Milwaukee for the period of five (5) years from the date of the said contract. That the said James O'Donnell, for his part, entered into and consented to perform all and singular of the requirements contained in the said specifications, and that he expected to perform the same in good faith. That on or about the 28th day of July, 1897, there was presented to the Common Council of the City of Milwaukee, at a special meeting held by said Council on that date, a communication purported to have been signed by James O'Donnell and John J Crilley, said communication being in effect that by reason of circumstances named therein they were unable to enter into the contract, and for reasons stated in the communication said communication contained the following, to-wit: "We respectfully ask your honorable body to release us from the obligations of our preliminary bond which accompanied our bid in accordance with the practice which has heretofore prevailed in the city, less such expenses as the city may incur by a readvertisement," purported to be signed, Jas. O'Donnell, John J. Crilley.

Affiant further deposes and says that on the 31st day of January, 1898, his attention was called to the communication specified above, and that he read said communication then for the first time; and deponent further testifies and says that he never saw the communication before; that he had never authorized any person to draw up such a communication or to sign his name thereto; that he never knew of the existence of such a communication until his attention was called to it on the 31st day of January, 1898.

Affiant further deposes and says that on the 2nd day of February, 1898, the original of the above communication was shown to him, and was then read by him for the first time, and upon inspection of the said communication he then and there pronounced the signature purported to be that of James O'Donnell as a forgery, that he did not sign it, that he did not authorize any one to sign it for him, and

that as a further evidence that the signature is a forgery, he then and there pointed out the fact that his name is misspelled on the document referred to, the name attached thereto being spelled O'Donnoll, while his name is spelled O'Donnell.

Affiant further deposes and says that on or about the 24th day of January, 1898, he requested the said John J. Crilley to sign a release or make an assignment of the contract heretofore mentioned, that he personally might endeavor to secure the contract heretofore mentioned; that upon said occasion the said John J. Crilley agreed to sign such an assignment, said agreement having been made by him in the presence of William O'Donnell and affiant; that upon the papers being presented to the said John J. Crilley on the 1st of February, 1898, he thereupon declined and refused to sign the said release or assignment, and upon being asked in the presence of one, C. C. Currier, and William O'Donnell, he then and there stated that he did agree to sign the papers aforesaid in the day aforesaid, but that he now declined and refused to do so, saying that he would not sign those papers for the sum of ten thousand dollars ($10,000).

Affiant further deposes and says that on the 2nd day of February, 1898, the papers above mentioned were again presented to said John J. Crilley by affiant in the presence of Thomas H. Dorr, and he was again requested to sign the release and assignment, which he then and there declined and refused to do; and was again asked by affiant whether he did not promise to sign such papers on the day aforesaid, and he again stated that he did make such a promise, but that he would not sign then now, and for the following reasons which he then and there gave in the presence of affiant and Thomas H. Dorr, aforesaid; that during the time when he, said Crilley, was endeavoring to secure the garbage contract in the months of May and June, 1897, as aforesaid, he had himself expended the sum of about twelve thousand dollars, and that he now had an agreement with the Wisconsin Rendering Company, or parties who represented the Wisconsin Rendering Company, by the terms of which agreement, he, the said John J. Crilley, was to receive the sum of twelve thousand dollars ($12,000) just as soon as the contract was awarded to Cooper & Burke; that the Wisconsin Rendering Company was to do the work under the Cooper & Burke contract as soon as it was awarded to Cooper & Burke.

Thereupon said John J. Crilley was asked by said Thomas H. Dorr for what purpose the twelve thousand dollars above mentioned was expended and the said John J. Crilley replied: "That you will never know."

Affiant further deposes and says that he urged said Crilley to sign the release and assignment, which he declined and refused to do.

Affiant further deposes and says that said John J. Crilley, in the presence of affiant and Mr. Thomas H. Dorr, gave as a reason why he would not now sign the release and assignment was that he had made arrangements since the 24th day of January, 1898, when he promised to sign said release and assignment, which prevented him from carrying out his promise at this time.

Affiant further deposes and says that during the conversation on the 31st day of January, 1898, he requested and urged said Crilley for further reasons why he would not sign the assignment, and pressed him for reply, whereupon said Crilley, in the presence of said C. C. Currier, of Newark, N. J., said affiant and William O'Donnell, of Milwaukee, said as follows: That if he should sign the assignment he would make enemies of the Wisconsin Rendering Company and of the railroad people; that he was making a deal with the Council by means of which his bondsmen would be released from the payment of the twenty thousand dollars ($20,000) forfeit which was now being held up, and if he signed said papers that the deal would not go through. And further affiant saith not.

JAS. O'DONNELL.

Subscribed and sworn to before me this 3rd day of February, 1898.

(Seal.) E. W. DIERICKS,
Notary Public.

The communication was referred to a special committee of five, who were authorized to investigate the entire garbage question, and an amendment was made to increase the number to seven, the chair appointing the gentlemen named as such committee: Ald. Renning, Chase, Stevens, Schranck, Jeske, Thuering and Stollenwerk; and at the same session a communication was received from his honor the Mayor, as follows:

MAYOR'S OFFICE,

MILWAUKEE, Feb. 8th, 1898.

To the Honorable the Common Council:

Gentlemen—I herewith return to your honorable body, without my approval, a resolution adopted at your last regular meeting, held on Jan. 31, 1898.

This resolution rescinds so much of a resolution by which the "Holthaus System" is declared to be the most sanitary for the disposal of garbage and dead animals within the city limits. My reasons for not approving this measure are the following: In pursuance of a resolution adopted by your honorable body, the Board of Public Works forwarded to you on the 24th day of May, 1897, various bids received by them for the collection and disposal of garbage and dead animals in the City of Milwaukee. Among the bidders Messrs. Crilley & O'Donnell were the lowest. They proposed to do the work within the city limits under a process known as the "Holthaus System."

Although the opinion seemed to prevail among the members of the Common Council that the Holthaus system has superior advantages, both sanitary and economic, yet your honorable body acted with prudence, and after a careful deliberation, on the 29th of May, 1897, adopted a resolution appointing a committee to visit places where the several systems of garbage disposal were in operation and investigate their comparative merits, this committee including three members of your body of acknowledged capability, known to be unprejudiced and devoted to the purposes of securing the highest public good, together with the City Engineer and Health Commissioner, performed its mission with zeal and intelligence reporting to the Council in full the result of their investigation on June 21, 1897. In concluding their report the committee says of the "Holthaus System," the examination of the several methods above mentioned shows that only one system is in practical operation which receives the "garbage from the wagon in a steam-tight receiver, or digester, from which time the garbage, gases and effluent remain continuously in containers, and not exposed to the air at any time until they are dried, condensed, or evaporated, and are no longer unsanitary or offensive, and the effluent, without color and practically odorless. This method is known as the 'Holthaus Sys-

tem.' Therefore, we respectfully call your attention to this method as the most satisfactory garbage reduction plant that we saw in operation."

With such confidence was this report, including its recommendations, received by your honorable body, that on the 7th day of July, 1897, the Council awarded the contract to Messrs. Crilley and O'Donnell for five years, at the same time resolving that the Holthaus system is the best and most sanitary for the disposal of garbage in the city limits, and specifying the same as that to be employed. This resolution was adopted by the Council by a vote of 35 ayes to 6 noes. This vote was taken on the 7th day of July, 1897, and the resolution adopted by this vote was rescinded on Jan. 31st, 1898, by a vote of 28 ayes to 14 noes.

Although ready to acknowledge that progress and improvements in methods of garbage disposal are being brought out by experience and ingenuity, and also that some time has elapsed since the Council so emphatically and intelligently recorded its convictions on the merits and desirability of the "Holthaus System," I am not convinced that the "Holthaus System" is less sanitary or desirable to-day than it was seven months ago.

In my opinion, we have obtained valuable information from the committee commissioned to inspect garbage disposal systems; their service to the city should not be ignored by rescinding the accompanying resolution, which is a safe guard against the use of unsanitary systems in the future, a result quite possible at any time by assignment of contract. The findings of the committee entrusted with the practical solution of the problem, "what system of garbage disposal is most desirable for this city?" have not been revised or invalidated, since their recommendations were endorsed by your honorable body by a large majority on July 7. If, at this time, facts exist or circumstances are so altered as to justify the conclusion which is expressed in the resolution, there should at least be given some statement of these facts, and some valid reason why the way should now be opened for the admission of the most unsanitary system of garbage disposal for operation in this city, and at the same time an implied declaration that our previous statements in re-

gard to the merits of the "Holthaus System" are to be revoked

Respectfully submitted,

WM. G. RAUSCHENBERGER,

Mayor.

It appears from the foregoing record, copied from the proceedings of the Common Council, that the attempt to provide for the collection and disposal of the garbage and dead animals of the City of Milwaukee has occupied two years of time, and more than one hundred separate actions of the Common Council or of its committees.

The record shows that the subject was discussed in thirty-five meetings of the Common Council. There were thirty-six resolutions—twenty-eight communications and twenty-one reports of committees (the number of sessions held by committees is unknown), without profitable result or final decision.

The foregoing does not include the inquiry made by the grand jury, or the investigation by a special committee of the Common Council not yet completed.

The proposition to do this work appears to be a plain business matter, devoid of serious complications, but no method has been perfected yet. The summer weather must now reach us before a plant can be built and ready for operation, even if construction is commenced at once. Meantime, the city is harrassed by the actions of the people, who, for one reason or another assume that the burial of garbage is dangerous to health—no matter how well it is buried, an objection never made until it became known that garbage had a commercial value, and sharp rivalry had sprung up between the proprietors of the several methods in use to secure the marketable values contained in the garbage.

It is to be hoped that your honorable body will make immediate provisions for the proper disposal of this material in a sanitary manner, that the city and the Health Department may be no longer embarrassed by continuing the method

forced upon the department because no other means have been provided.

The method itself is unobjectionable, but persons have been led to believe that there are lurking in so-called garbage the germs of most deadly diseases, merely waiting for an opportunity to spread contagion on every hand; forgetting for the moment that what to-day is called garbage was yesterday wholesome food spread upon the tables of all our citizens.

The present method of burying garbage is less expensive to the city than the former contract with the Wisconsin Rendering Company, notwithstanding it was necessary to make provision for collecting the garbage and dead animals by purchasing wagons, barrels, etc., and paying for permission to bury the material upon farm land adjacent to the city, where it is ploughed under or buried by persons employed for that purpose—with all these expenses the work has averaged about $2,000 per month less than the contract with the Wisconsin Rendering Company, and by reason of the saving thus affected the Health Department covered back into the city treasury the sum of $12,000.00 in September last, as more fully appears by the communication sent to your honorable body by the Health Commissioner on September 27th, 1897; see page.

This shows that the work can be done for less money than under the former contract, and collections are made more frequently and thoroughly than by the last contractors.

In the report for 1896 I requested that the Health Department should be provided with an addition to the force of inspectors. An ordinance was introduced providing for four additional members more than three months ago, but it has not yet passed.

To carry on the work which should be done the additional number is needed, the work cannot be done properly without them. One should be a veterinary surgeon, one a practical baker, and two others, competent food inspectors. There should also be a matron. In this city there are a number

of manufacturies employing many girls and boys. For obvious reasons it is impracticable for men to make the necessary inspections required, to see that sanitary arrangements are provided for the girls employed; a competent woman of suitable age should do this work, also to make other inspections required of health officers which could be performed better by a woman than by a man; this would cause less dissatisfaction, and in many ways improve the service of the Health Department, and I cordially recommend the appointment of a matron.

During my term of service as Commissioner of Health it has been my desire to carry forward the work already commenced or projected by my predecessors in this office. Much of the work attempted has met with violent and protracted opposition on the part of some, but the results accomplished can not be argued out of existence.

A liberal policy extended to the Health Department will still further improve the conditions necessary to maintain a proper administration of its affairs, and will, I believe, further reduce the annual death rate, which is now as low, if not a trifle lower, than any other city of similar size in the country.

The duties imposed upon the commissioner and his assistants are of necessity unpleasant because they are in a measure corrective, and when suggestions are made to the owners that premises should be kept clean the tendency is often to resist the suggestion and to maintain an attitude of defiance toward the officials charged with executing the laws.

But with wholesome laws, properly administered, and for the execution of which liberal provisions is made, the work of the department will steadily decrease the death rate as the accomplishments of sanitary science shall point out the way to improve health, and save life.

Respectfully submitted,

WALTER KEMPSTER, M. D.,

Commissioner of Health.

REPORT OF ANALYST.

Walter Kempster, M. D., Commissioner of Health:

DEAR SIR—I herewith submit a report of the chemical and bacteriological work done by the Health Department during the year 1897.

Our work during the year assumed such proportions and we became so overcrowded in our old rooms that it was found necessary to fit up another large room in which the bulk of the chemical work could be done. This large, well-lighted room has been provided with a conveniently arranged desk, a fume chamber, automatic water still, large size Babcock milk tester run by electricity, and gas and water in convenient locations, and this in addition to the two rooms already occupied by us puts us in position to quickly and easily attend to such examinations as are necessary. A large Bausch & Lomb microscope has also been added to our apparatus, and will be very useful, especially when large amplification is required.

During the year, and especially during the summer months, particular attention was paid to our milk supply. No more important work can be done than along this line, and while much has been accomplished, much still remains to be done. The quality of the milk, so far as fat is concerned, has steadily increased since regular, systematic examinations of it were made, and with this improvement in quality, the statistics show a marked decrease in infant mortality, but there is yet too great a number of deaths from diarrhœal diseases, and I believe that at the present time this is not due so much to the absence of nourishing constituents of the milk, as to the presence of foreign material, introduced largely through the slovenly and careless handling of it.

If there is one article of food that should, more than another, be kept free from filth, that article is milk.

First, because it is one of the best mediums for the development of germs.

Second, because milk is more particularly an infant's food.

But if there is one article of food which is handled more carelessly than another, that article is milk. Dirty milkmen keep dirty cows in

dirty barns and milk them in dirty pails. They pour the milk, which by this time is very dirty, into dirty cans, and send them to the city, where dirty, irresponsible boys peddle the milk from dirty wagons pulled by dirty horses. Not all of them do all this. Too many of them do.

But the practical part of all this is that the health and lives of young children who are unable to chose their own milk are at stake, but must take what is given them, though it kills them.

Every spoonful of milk from a can which has been filled by one of these careless milkers will contain easily 100,000 germs, and as no efforts are made to cool the milk, these germs quickly develop, and in the course of a few hours each teaspoonful will contain millions of germs. These germs are not necessarily the germs that produce epidemics—such as typhoid fever, diphtheria, scarlet fever, etc.; but they do alter the milk so that it is unfit for use, especially by little children. These germs assimilate their food and give off waste products just as higher organisms do, and it is these waste products that are the fruitful cause of diarrhœal diseases, especially in the summer months. In winter, nature cools the milk below the point where the germs thrive, and diarrhœa is comparatively rare.

These products are not always the same, but we have always lactic acid formed, and generally butyric acid, both of which are irritating and injurious to the digestive tract, but, worst of all, we may have formed some of the ptomaines, which are genuine poisons, and which once formed, no amount of sterilizing or pasteurizing can remove or render harmless. Undoubtedly, nine-tenths, at least, of the diarrhœal diseases are caused by these waste products of germ life.

The remedy is simple, if not easy to carry out. Cleanliness of milkers, barns, cows and utensils is absolutely necessary. As soon as milked, the milk should be aearated and cooled as rapidly as possible to a low temperature. It should then be put in absolutely clean glass bottles which have been sterilized. When the bottles are filled they should be tightly sealed and kept on ice or at a low temperature until delivered, which should be as soon as possible in hot weather. In addition to this, good healthy cows, fed on good food with an abundant supply of fresh water, are essential. Distillery slops and vinegar slops, while they do not materially affect the percentage composition of milk, cause it to quickly ferment and become dangerous to feed to children. It is a disgrace that our laws will sanction the use of this material which

does not contain the proper elements of a food, and which produces milk of so harmful a quality.

During 1897 we analyzed 4,673 samples of milk, and of these 254 were below three per cent. butter fat (5.43%). One hundred and thirty-eight arrests were made, and with two exceptions all were fined in amounts varying from costs to $25 and costs; the total fines amounting to $810. During November and December an effort was made to ascertain the actual amount of milk tested. This was found to be 8,638 quarts in November and 10,540 quarts in December. A large proportion of those below three per cent. were from stores. This is due to two causes: First, the milkmen supply the stores with their poorest milk. Second, the storekeepers take very little care of the milk. They do not stir it before making a sale, and, moreover, many of them do not take care to keep dirt out of it.

Eleven hundred and ninety-four licenses were granted during the year, and there are about six hundred wagons running.

TABLE NO. 1.

Number milk dealers licensed during the year	1,194
Total samples analyzed, Jan. 1, 1897—Jan. 1, 1898	4,673
Average fat of 4,673 samples	3.74%
Number samples below 3 per cent. butter fat (5.43 per cent.)	254
Average fat of 4,419 samples	3.81%
Total samples brought in by Inspectors	4,090
Average fat of 4,090 samples	3.73%
Number samples below 3 per cent. (5.25 per cent.)	215
Total samples brought in by private individuals	583
Average fat of 583 samples	3.80%
Number samples below 3.0 per cent. (6.7 per cent.)	39
* Total samples from depot	144
* Average fat of 144 samples	4.05%
* Number samples below 3.0 per cent. (1.4 per cent.)	2
Number samples cream analyzed	54
Average fat of 54 samples	19.4%
Number arrests made	138
Amount of fines imposed	$810.00

* Included in samples brought in by Inspectors.

TABLE NO. 2.

MONTH.	Samples Analyzed.	Average Fat.	No. below 3.0%	Cream Analyzed.	Average Fat.	Arrests.	Fines.
January	236	3.63	18	2	16.0	.....	.....
February	237	3.88	13	5	22.4	.....	.....
March	240	3.64	17	4	23.4	12	$75 00
April	245	3.58	16	5	18.5	9	90 00
May	249	3.63	21	10	20.2	12	50 00
June	464	3.69	43	8	19.6	27	115 00
July	487	3.64	46	7	20.5	33	215 00
August	485	3.74	28	2	20.5	23	200 00
September	420	3.73	25	2	16.5	11	40 00
October	478	3.81	8	2	10.0	4	.....
November	501	3.89	7	4	15.25	4	25 00
December	631	3.93	12	3	20.0	3	.....
Totals	4673	3.74	254	54	19.4	138	$810 00

TABLE NO. 3.

	1896.	1897.
Number of analyses of milk made.....	2134	4673
Number samples below 3.0 per cent.....	191	254
Per cent. below 3.0 per cent.....	8.95	5.43
Average fat.....	3.62	3.74
Number analyses cream made.....	37	54
Average fat of cream.....	19.2	19.4
Number arrests made.....	7	138
Amount of fines imposed.....	$116 00	$810 00

WATER.

Mr. Ladoff has continued the chemical examination of the city and well waters which was begun in 1896. The city water has been of a very good quality throughout the year, the albuminoid ammonia which is the most variable constituent being highest in July.

Of the 77 wells, the water of which has been examined, 56 were found to be unfit for use, 14 suspicious and only 7 usable. Of the 77 wells, at least 38 were within 20 feet of a privy, barn or sewer, 61 at least were within 40 feet of such source of contamination, and only 4 were 50 feet or more in any case where the distance was stated. Sickness was reported at 27 places where the water was obtained, 13 cases of which sickness were typhoid.

ANALYSIS OF CITY WATER—PARTS PER 100,000.

JANUARY.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albumonoid Ammonia.	Oxyd. Matter.	Total Solids.	Loss on Ignition.	Chlorides.
City Pumping Station.....	Jan. 7	0.0	Trace.	0.0003	0.0090	0.47	15.0	7.0	0.54
Tenth Dist. Prim. No. 3.....	" 8	0.0	Trace.	0.0003	0.0100	0.49	15.0	7.0	0.48
Tenth Dist. Prim. No. 10.....	" 9	0.0	Trace.	0.0040	0.0145	0.49	16.0	6.0	0.50
Tenth Dist. Prim. No. 2.....	" 11	0.0	Trace.	0.0003	0.0100	0.47	15.0	5.0	0.49
Tenth Dis., 12th and Lloyd sts.	" 11	0 0	Trace.	0.0060	0.0110	0.47	17.0	5.0	0.50
City Pumping Station.....	" 12	0.0	0.0	0.0003	0.0100	0 40	15.0	5.0	0.50
Eleventh Dist. Primary School.	" 13	0.0	Trace.	0.0070	0.0100	0.45	16.0	6.0	0.50
Seventeenth Dist. Prim. School.	" 13	0.0	Trace.	0.0070	0.0100	0.45	18.0	8.0	0.50
Eleventh District, Forest Home and Tenth avenues	" 14	0.0	Trace.	0.0070	0.0100	0 45	13.0	4.0	0.50
Seventeenth District School.....	" 14	0.0	Trace.	0.0080	0.0100	0.45	15.0	5.0	0.50
Ninth District School.....	" 15	0.0	Trace.	0.0015	0.0090	0.45	15 0	5.0	0.50
Nineteenth Dist. Prim. School..	" 15	0.0	Trace.	0.0001	0.0100	0.45	14.0	5.0	0.50
City Pumping Station.	" 19	0.0	Trace.	0.0005	0.0090	0.45	14.0	6.0	0.50
Eighteenth District School.....	" 19	0.0	Trace.	0.0005	0.0100	0.45	15.0	6.0	0.50
First District School.....	" 19	0.0	Trace.	0.0005	0.0100	0.45	15.0	5.0	0.50
City Pumping Station.....	" 26	0.0	Trace.	Trace.	0.0080	0.45	16.0	6.0	0.45
Average.....	.....	0.0	Trace.	.0027	0.0101	0.45	15.25	5.7	0.497

ANALYSIS OF CITY WATER—PARTS PER 100,000.

FEBRUARY.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albumonoid Ammonia.	Oxyd. Matter.	Total Solids.	Loss on Ignition.	Chlorides.
City Pumping Station.....	Feb. 3	0.0	Trace.	0.0003	0.0015	0.263	17.0	5.0	0.48
Twentieth Dis. Primary School.	" 5	0.0	0.0	0.0012	0.0091	0.275	14.0	7.0	0.48
Twentieth Dis. Primary School.	" 5	0.0	0.0	0.0012	0.0091	0.275	18.0	9.0	0.48
City Pumping Station.....	" 9	0.0	0.0	0.0011	0.0095	0.150	13.0	4.0	0.45
Eighth District School No. 1....	" 9	0.0	0.0	0.0009	0.0090	0.200	15.0	5.0	0 45
Eighth District School No. 1....	" 10	0.0	0.0	0.0011	0.0090	0.150	15.0	5.0	0.45
Tenth District Primary No. 1...	" 11	0 0	Trace.	0.0003	0.0010	0.175	15.0	5.0	0.45
Tenth District Primary No. 2...	" 12	0.0	Trace.	0.0003	0.0010	0.175	15.0	5.0	0.45
City Pumping Station.....	" 15	0.0	Trace.	0.0009	0.0016	0.150	17.0	5 0	0.46
Thirteenth Dist. Primary No. 1.	" 16	0.0	Trace.	0.0005	0.0010	0.150	17.0	5.0	0.47
Thirteenth Dist. Primary No. 2.	" 17	0.0	Trace.	0.0003	0.0010	0.150	18.0	6.0	0.47
Twentieth Dist. Primary No. 3.	" 19	0.0	Trace.	0.0003	0.0010	0.150	15.0	4.0	0.45
Twentieth Dist. Primary No. 4.	" 20	0.0	Trace.	0.0003	0.0010	0.150	14.0	5.0	0.45
Hydrant, 99 Michigan.....	" 25	0.0	Trace.	Trace.	0.00094	0.150	21.0	8.0	0.49
Fourteenth District School.....	" 26	0.0	None.	None.	0.00082	0.100	19.0	9.0	0.49
City Pumping Station...	" 27	0.0	None.	None.	0.0011	0.125	17 0	4.0	0.49
Average.....	.....	0.0	Trace.	0.11154	0.00360	0.1742	16.25	5.69	0.466

ANALYSIS OF LAKE WATER—PARTS PER 100,000.

MARCH.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albumonoid Ammonia.	Oxyd. Matter.	Total Solids.	Loss on Ignition.	Chlorides.
Twelfth District School.....	Mch, 1	0.0	Trace.	Trace.	0.0009	0.160	16.0	6.0	0.45
Fourth District School.....	" 4	0.0	Trace.	0.0002	0.0009	0.125	14.0	6.0	0.45
Third District School.....	" 5	0.0	Trace.	0.0002	0.0008	0.125	17.0	8.0	0.47
City Pumping Station.....	" 6	0.0	Trace.	0.0002	0.0060	0.125	19.0	7.0	0.48
Ninth Ward Primary School....	" 8	0.0	0.0	0 0002	0.0070	0.125	17.0	5.0	0.46
Nineteenth Dist. School No. 1...	" 10	0.0	0.0	0.0001	0.0011	0.100	14.0	4.0	0.35
Nineteenth Dist. School No. 2..	" 11	0.0	0.0	0.0002	0.0010	0.100	15.0	5.0	0.40
City Pumping Station.....	" 12	0.0	Trace.	0.0003	0.0010	0.125	14.0	4.0	0.46
Twelfth Dist. Primary School..	" 13	0.0	Trace.	Trace.	0.0011	0.150	14.0	4.0	0.45
East Side High School.....	" 15	0.0	Trace.	0.0002	0.0009	0.125	17.0	7.0	0.40
Fifth District School.....	" 16	0.0	Trace.	0.0003	0.0010	0.140	16.0	6.0	0.39
Seventh District School.....	" 18	0.0	Trace.	0.0002	0.0013	0.150	16.0	5.0	0.40
City Pumping Station.....	" 19	0.0	Trace.	0.0001	0.0009	0.120	16.0	4.0	0.40
Hydrant, South Milwaukee. ...	" 20	Heavy trace.	Heavy trace.	0.0016	0.0013	0.187	16.0	5.0	0.50
Parochial School, 8th and Vliet.	" 22	0.0	Trace.	0.0002	0.0010	0.150	16.0	5.0	0.49
Parochial School, 11th and Cherry.	" 23	0.0	Trace.	0.0007	0.0010	0.175	15.0	4.0	0.50
St. Michael Parochial School...	" 24	0.0	Trace.	0.0002	0.0009	0.100	19.0	7.0	0.40
City Pumping Station.....	" 25	0.0	Trace.	0.0002	0.0012	0.170	14.0	5.0	0.49
C. & N. W. R'y Depot.....	" 29	0.0	Trace.	0.0002	0.0010	0.150	15.0	5.0	0.50
Laboratory....	" 30	0.0	Trace.	0.0002	0.0010	0.175	15.0	4.0	0.50
Average.....	.....	0.0	Trace.	0.000225	0.001515	0.13885	15.75	5.3	0.447

ANALYSIS OF LAKE WATER—PARTS PER 100,000.

APRIL.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia	Albumonoid Ammonia.	Oxyd. Matter.	Total Solids.	Loss on Ignition.	Chlorides.
City Pumping Station	April 1	None	Trace	0.0002	0.0010	0.150	15.0	5.0	0.44
Laboratory	" 2	"	"	0.0008	0.0017	0.150	18.0	5.0	0.40
424 Twenty-Second street	" 5	"	"	0.0004	0.0012	0.170	12.0	5.0	0.49
193 Jefferson street	" 6	"	"	0.0004	0.0019	0.150	13.0	3.0	0 49
1063 Third street	" 7	"	"	0.0004	0 0012	0.170	12.0	5.0	0.49
692 Hubbard street	" 8	"	"	0.0002	0.0010	0.125	14 0	5.0	0.49
City Pumping Station	" 9	"	"	0.0002	0.0014	0.120	14.0	5.0	0.49
C. & N. W. R'y Depot	" 12	"	"	0.0002	0.0015	0.100	14.0	4.0	0.45
Laboratory	" 13	"	"	0.0002	0.0010	0.120	14.0	5.0	0.45
915 Kinnickinnic avenue	" 14	"	"	0.0002	0.0012	0.125	16.0	5.0	0.48
Laboratory	" 15	"	"	0.0002	0.0009	0.108	17.0	5.0	0.49
554 Fourteenth street	" 16	"	"	0.0002	0.0012	0.115	13.0	6.0	0.48
City Pumping Station	" 17	"	"	Trace	0.0013	0.100	14.0	6.0	0.49
Laboratory	" 17	"	"	0.0002	0.0015	0.125	18.0	5.0	0.48
527 East Water street	" 19	"	"	0.0002	0.0012	0 130	16 0	6.0	0.40
Laboratory	" 19	"	"	0.0002	0.0011	0.125	19.0	6.0	0740
63 Juneau avenue	" 20	"	"	0.0002	0.0012	0.125	16.0	6.0	0.45
City Pumping Station	" 21	"	"	0.0001	0.0008	0.125	16.0	5.0	0.45
Laboratory	" 27	"	"	0.0002	0.0010	0.125	16.0	7 0	0.45
1007 Winnebago street	" 28	"	"	0.0002	0.0012	0.108	19.0	6.0	0.45
City Pumping Station	" 29	"	"	0.0002	0.0000	0.125	17.0	5.0	0.45
Average	.....	None	Trace	0.00121	0.00121	0.128	15.38	5.23	0.46

ANALYSIS OF LAKE WATER—PARTS PER 100,000.

MAY.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albumonoid Ammonia.	Oxyd. Matter.	Total Solids.	Loss on Ignition.	Chlorides.
Laboratory tap	May 4	None	Trace	0.0002	0.016	0.150	17.0	5.0	0.45
C. & N. W. R'y Depot	" 5	"	"	0.0002	0.012	0.137	23.0	6.0	0.45
City Pumping Station	" 5	"	"	0.0002	0.014	0.137	17 0	7.0	0.45
64 First avenue	" 7	"	"	0.0001	0.008	0.113	14.0	5.0	0.45
Laboratory tap	" 8	"	"	0.0002	0.012	0.125	19.0	5.0	0.45
Laboratory tap	" 10	"	"	0.0002	0.011	0.113	18.0	6.0	0.45
Laboratory tap	" 12	"	"	0 0001	0.010	0.100	15.0	6.0	0.45
City Pumping Station	" 13	"	"	0.0002	0.016	0.110	16.0	6.0	0.40
Laboratory tap	" 17	"	"	0.0002	0.011	0.125	13.0	5.0	0.49
Laboratory tap	" 18	"	"	0.0002	0.028	0.132	13.0	5.0	0.48
512 Lloyd street	" 19	"	"	0.0002	0.008	0.113	13 0	5.0	0.49
City Pumping Station	" 20	"	"	0.0019	0.020	0.125	13.0	5.0	0.40
Laboratory tap	" 24	"	"	0.0002	0.007	0.100	18.0	7.0	0.45
Court House hydrant	" 25	"	"	Trace	0.012	0.125	18.0	5.0	0.45
City Pumping Station	" 27	"	"	0.0002	0.008	0.150	19.0	4.0	0.45
Average	.....	None	Trace	0.000286	0.01286	0.1236	16.4	5.4	0.45

ANALYSIS OF LAKE WATER—PARTS PER 100,000.

JUNE.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albumonoid Ammonia.	Oxyd. Matter.	Total Solids.	Loss on Ignition.	Chlorides.
City Pumping Station.....	June 3	None	Trace	0.0002	0.0080	0.125	21 0	11 0	0.45
Laboratory tap.....	" 4	"	"	0.0090	0.0115	0.125	15.0	5.0	0.45
Laboratory tap.....	" 7	"	"	0.0003	0.0126	0.125	16.0	5.0	0.49
C. & N. W. R'y Depot.....	" 8	"	"	0.0010	0.0126	0.125	15.0	5.0	0 45
City Pumping Station.....	" 10	"	"	0.0010	0.0100	0.113	15.0	6.0	0.46
C. & N. W. R'y Depot.....	" 11	"	"	0.0002	0.0100	0.120	15.0	5.0	0.45
Laboratory tap.....	" 14	"	"	0.0001	0.0100	0.115	17.0	7.0	0.46
1007 Winnebago street.....	" 15	"	"	0.0360	0.0180	0.100	11.0	4.0	0.48
1068 Third street.....	" 16	"	"	0.0010	0.0156	0.100	17.0	6.0	0.45
City Pumping Station.....	" 17	"	"	0.0010	0.0100	0 100	11.0	5.0	0.45
Laboratory tap.....	" 23	"	"	0.0020	0.0250	0.100	14.0	4 0	0.45
City Pumping Station.....	" 24	"	"	0.0010	0.0060	0.110	15.0	5 0	0.46
1007 Winnebago street.....	" 24	"	"	0.0010	0.0056	0.100	15.0	5.0	0.45
City Pumping Station.....	" 30	"	"	0.0020	0.0200	0.120	13.0	4.0	0.49
Average.	.....	None	Trace	0.003985	0.12492	0.1127	15.0	5.5	0.46

ANALYSIS OF LAKE WATER—PARTS PER 100,000.

JULY.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albumonoid Ammonia.	Oxyd. Matter.	Chlorides.	Total Solids.	Loss on Ignition.
City Pumping Station	July 10	None	Trace	0.002	0 020	0.10	0.4	14.0	5.0
Laboratory tap	" 12	"	"	0.001	0.018	0.10	0.4	13.0	5.0
Laboratory tap	" 15	"	"	0.001	0.011	0.10	0.4	15.0	4.5
City Pumping Station	" 16	"	"	0.002	0.010	0.10	0.4	13.0	4.0
1007 Winnebago street	" 17	"	"	0.001	0.018	0.10	0.4	14.0	5.0
C. M. & St. Paul R'y Depot	" 19	"	"	0.001	0.014	0 10	0.4	15.0	5.0
458 Prospect avenue	" 20	"	"	0.001	0.013	0.10	0.4	12.5	5.0
Laboratory tap	" 21	"	"	0.001	0.012	0.10	0.4	14.0	5 0
City Pumping Station	" 22	"	"	0.001	0.010	0.10	0.4	14.0	5.0
Court House hydrant	" 23	"	"	0.002	0.012	0.10	0.4	14.0	5.0
Laboratory tap	" 27	"	"	0.001	0.010	0.10	0.4	14.0	5.0
Laboratory tap	" 28	"	"	0.001	0.012	0.11	0.4	14.0	5.0
Laboratory tap	" 29	"	"	0.002	0.013	0.11	0.4	12.0	4.5
City Pumping Station	" 30	"	"	0.002	0.023	0.13	0.4	14.0	5.0
663 Holton street	" 31	"	"	0.001	0.025	0.11	0.4	15.0	5.0
Average	.....	None	Trace	0.00193	0.01473	0.103	0.40	13.80	4.86

ANALYSIS OF LAKE WATER—PARTS PER 100,000.

AUGUST.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albumonoid Ammonia.	Oxyd. Matter.	Chlorides.	Total Solids.	Loss on Ignition.
Laboratory tap	Aug. 3	None	Trace	0.001	0.011	0.11	0.4	14.0	5.0
Laboratory tap	" 5	"	"	0.001	0.011	0.11	0.4	14.0	4.5
City Pumping Station	" 6	"	"	0.001	0.010	0.10	0.4	14.0	5.0
Laboratory tap	" 9	"	"	0.001	0.009	0 12	0.4	15.0	5.0
Laboratory tap	" 11	"	"	Trace	0.010	0.11	0.4	13.5	5.0
C. & N. W. R'y Depot	" 12	"	"	0.001	0.010	0 11	0.4	15.0	5.0
City Pumping Station	" 16	"	"	0.001	0.009	0.10	0.4	14.0	5.0
Laboratory tap	" 17	"	"	0 001	0.011	0.11	0.4	13.5	5.0
City Pumping Station	" 20	"	"	0.001	0.009	0.10	0.4	15.0	5.0
Court House hydrant	" 21	"	"	0.001	0.010	0.10	0.4	14.0	5.0
Laboratory tap	" 23	"	"	0.001	0.010	0.11	0 4	15.0	5.0
1007 Winnebago street	" 23	"	"	Trace	0.009	0.10	0.4	16.0	5.0
City Pumping Station	" 25	"	"	0.001	0.010	0.11	0.4	14.0	5.0
Juneau Park hydrant	" 27	"	"	0.001	0.010	0 10	0.4	14.0	5.0
Laboratory tap	" 28	"	"	0.001	0.009	0.10	0.4	14.0	5.0
Average	... .	None	Trace	0.000866	0.009866	0.106	0.4	14.33	4.966

ANALYSIS OF LAKE WATER—PARTS PER 100,000.

SEPTEMBER.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albumonoid Ammonia.	Oxyd. Matter.	Chlorides.	Total Solids.	Loss on Ignition.
Laboratory tap	Sept. 10	None	Trace	0.001	0.019	0.10	0.4	15.0	5.0
City Pumping Station	" 11	"	"	0.001	0.007	0.10	0.4	14.0	5.0
Laboratory tap	" 14	"	"	0.001	0.010	0.10	0.4	17.0	5.0
Laboratory tap	" 15	"	"	0.001	0.010	0.10	0.4	13.0	5.0
Laboratory tap	" 18	"	"	Trace	0 016	0.10	0.4	14.0	5.0
City Pumping Station	" 18	"	"	0.001	0.012	0.12	0.4	16.0	5.0
Court House hydrant	" 19	"	None	0.001	0.011	0 12	0.4	16.0	6.0
C. & N. W. R'y Depot	" 20	"	"	0.001	0.016	0.11	0.4	18.0	5.0
Laboratory tap	" 21	"	Trace	0.001	0.011	0.11	0.4	15.0	4.0
Laboratory tap	" 22	"	None	Trace	0.010	0.10	0.4	14.0	4.0
Laboratory tap	" 24	"	Trace	0.001	0.014	0.11	0.4	14.0	4.0
City Pumping Station	" 25	"	"	0.001	0.011	0.11	0.4	14.0	4.0
Juneau Park hydrant	" 27	"	"	0.001	0.011	0.11	0.4	14.0	4.0
Laboratory tap	" 28	"	"	0.001	0.010	0.11	0.4	15.0	5.0
City Pumping Station	" 29	"	"	0.001	0.010	0.11	0.4	14.0	5.0
Average	... .	None	Traces	0.00086	0.01186	0.107	0.4	14.86	4.73

ANALYSIS OF LAKE WATER—PARTS PER 100,000.

OCTOBER.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albumonoid Ammonia.	Oxyd. Matter.	Chlorides.	Total Solids.	Loss on Ignition.
City Pumping Station	Oct. 8	None	Slight trace	Trace.	0.008	0.15	0.40	20.0	4.5
Laboratory tap	" 11	"	"	Trace.	0.011	0.11	0.39	14.0	5.0
Laboratory tap	" 12	"	"	0.0020	0.011	0.11	0.38	13.0	4.5
Laboratory tap	" 13	"	"	0.0001	0.009	0.11	0.37	15.0	5.0
Laboratory tap	" 14	"	"	0.0001	0 010	0.11	0 37	15.0	5.0
Laboratory tap	" 18	"	"	0.0001	0.009	0.11	0.36	14 0	5.0
Laboratory tap	" 19	"	"	0.0001	0.008	0.11	0.39	14.0	5.0
Laboratory tap	" 20	"	"	0.0001	0.009	0.10	0.38	17.0	5.0
City Pumping Station	" 21	"	"	0.0001	0.008	0.11	0.39	20.0	5.0
Laboratory tap	" 22	"	"	0.0001	0.008	0.11	0.38	15.0	5.0
City Pumping Station	" 23	"	"	0.0001	0.009	0.11	0.40	15.0	5.0
Laboratory tap	" 27	"	"	0.0001	0.012	0.11	0.40	14.0	5.0
Laboratory tap	" 28	"	"	0.0001	0.012	0.11	0.40	15.0	5.0
City Pumping Station	" 29	"	"	0.0001	0.009	0.11	0.40	18.0	5.0
Laboratory tap	" 30	"	"	0.0001	0.008	0.11	0.39	15.0	5.0
Average	.....	.....	.....	0.00021	0.0094	0.112	0.386	15.6	4.93

ANALYSIS OF LAKE WATER—PARTS PER 100,000.

NOVEMBER.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albumonoid Ammonia.	Oxyd. Matter.	Chlorides.	Total Solids.	Loss on Ignition.
Laboratory tap	Nov. 1	None	Slight trace	0.0001	0.012	0.11	0.4	16.0	5.0
City Pumping Station	" 6	"	"	0.0001	0.010	0.10	0.4	15.0	5.0
City Pumping Station	" 12	"	"	0.0001	0.009	0.10	0.4	18.0	6.0
Laboratory tap	" 15	"	"	0.0001	0.009	0.10	0.4	15.0	5.0
Laboratory tap	" 16	"	"	0.0001	0.011	0.10	0 4	13.0	4.0
Laboratory tap	" 17	"	"	0.0001	0.008	0.10	0.4	15.0	5.0
Laboratory tap	" 18	"	"	0.0001	0.009	0.10	0.4	14.0	5.0
Laboratory tap	" 19	"	"	0.0001	0.011	0.10	0.4	12.0	4.0
City Pumping Station	" 20	"	"	0.0001	0.011	0.10	0.4	12.0	4.0
Laboratory tap	" 21	"	"	0.0001	0.009	0.11	0.4	15.0	5.0
Laboratory tap	" 22	"	"	0.0001	0.010	0.10	0.4	11.0	4.0
Laboratory tap	" 26	"	"	0.0001	0.010	0.10	0.4	14.0	5.0
Laboratory tap	" 27	"	"	0.0001	0.014	0.10	0.4	15.0	5.0
City Pumping Station	" 29	"	"	0.0001	0.016	0.11	0.4	15.0	5.0
Laboratory tap	" 30	"	"	0.0001	0.015	0.11	0.4	14.0	5.0
Average	.....	.....	.....	0.0001	0.01093	0.102	0.4	14.26	4.8

ANALYSIS OF LAKE WATER—PARTS PER 100,000.

DECEMBER.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albumonoid Ammonia.	Oxyd. Matter.	Chlorides.	Total Solids.	Loss on Ignition.
City Pumping Station	Dec. 4	None	Slight trace	0.0001	0.010	0.10	4.0	14.0	5.0
Laboratory tap	" 6	"	"	0 0001	0.094	0.15	4.0	14.0	5.0
Laboratory tap	" 7	"	"	0.0001	0.010	0.13	4.0	14.0	5.0
Laboratory tap	" 8	"	"	0 0001	0.014	0.12	4.0	14.0	5.0
Laboratory tap	" 9	"	"	0.0001	0.010	0.10	4.0	15.0	5.0
Laboratory tap	" 10	"	"	0.0001	0.011	0.12	4.0	15.0	5.0
City Pumping Station	" 13	"	"	0.0001	0.014	0.11	4.0	14.0	5.0
Laboratory tap	" 14	"	"	0.0001	0.014	0.12	3.8	14.0	5.0
Laboratory tap	" 15	"	"	0.0001	0.011	0.12	3.9	15.0	5.0
Laboratory tap	" 17	"	"	0.0001	0.011	0.11	3.9	15.0	5.0
Laboratory tap	" 18	"	"	0.0001	0.010	0.12	3.5	14.0	5.0
City Pumping Station	" 28	"	"	0.0001	0.011	0.10	3.9	15.0	5.0
Average	.....	.....	.....	0.0001	0.0183	0.116	3.916	14.416	5.0

ANALYSIS OF ICE.

THE ANALYSIS MADE OF ICE FROM THE SEVERAL PLACES INDICATED, SHOW THE FOLLOWING RESULTS IN 100,000 PARTS.

FEBRUARY.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albumonoid Ammonia.	Oxyd. Matter.	Total Solids.	Loss on Ignition	Chlorides.
Menomonee river	Feb. 1st.	0.004	6 6	0.024	0.009	0.5	19.0	5.0	0.7
Wisconsin Lakes Ice Co	" 2d.	0.0	5.882	0.0240	0.0032	0.500	.....	.....	0.5
Plankinton Packing Co	" 8th.	0.0	0.238	0.0120	0.0036	0.385	12.0	5.0	0.4
Hinton Dock Co	" 20th.	0.0	0.200	0.0030	0.0022	0.225	16.0	5.0	0.4
Wisconsin Lakes Ice Co	" 22d	0.0	0.100	0.0006	0.0010	0.125	6.0	3.0	0.4

ANALYSIS OF WELL WATER—PARTS PER 100,000.

FEBRUARY.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albumonoid Ammonia.	Oxyd. Matter.	Total Solids.	Loss on Ignition.	Chlorides.	Result for use.
909 Booth St.....	Feb. 1	0.45	Trace.	0.0009	0.0024	0.5	159.0	70.0	18 0	Not fit for use.
1313 Garfield ave....	Feb. 8	1.875	0.0	0.0009	0 0028	0.325	168.0	65.0	20.0	

ANALYSIS OF WELL WATER—PARTS PER 100,000.

MARCH.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albumonoid Ammonia.	Oxyd. Matter.	Total Solids.	Loss on Ignition.	Chlorides.	Result for use.
1110 Eighth street...	Mch. 2	0.40	0.0	0.0003	0.0020	0.250	164.0	67.0	15.2	Unfit.
702 Twelfth avenue.	" 3	0.612	Trace.	0.0012	0.0540	0.155	336.0	48.0	15.4	Unfit.
Jones Isl., U. S. Life St.	" 5	0.0	0.0	0.0012	0.0070	0.100	31.0	39.0	0.7	Usable.
533 Sixteenth street.	" 11	Large excess.	0.0	0.0225	0.2000	2.100	70.0	26.0	7.0	Unfit.
728 Wilson street....	" 17	62.5	0.0	Trace.	0.0008	0.150	97.0	37.0	9.37	Unfit.
211 Hadley street...	" 23	3.0	Heavy trace	0.0092	0.0030	0.250	105.0	58.0	7.0	Unfit.
702 Sixth street.....	" 25	1.0	Trace.	0.0006	0 0021	0.725	205.0	58.0	8.75	Suspicious.
711 Third street.....	" 25	0 15	0.333	0.0378	0.0061	1.200	47 0	18.0	5.0	Unfit.
850 Greenfield ave..	" 25	0.20	Trace.	0.0010	0.0010	0.150	69.0	29.0	5.2	Suspicious.

ANALYSIS OF WELL WATER—PARTS PER 100,000.

APRIL.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albumonoid Ammonia.	Oxyd. Matter.	Total Solids.	Loss on Ignition.	Chlorides.	Result for use.
664 Park Lane.....	Apr. 3	6.0	Trace.	0.03800	0.0190	0.500	194.0	100.0	18.0	Unfit.
1029 Eighth street...	" 8	2.5	Trace.	0.00020	0.0028	0.700	248.0	133.0	15.5	Unfit.
711 Third street	" 20	0.15	Trace.	0.00618	0.0043	0.600	47.0	18.0	9.0	Unfit.
480 Burnham street.	" 23	1.33	Trace.	0.01500	0.0040	0.150	144.0	74.0	15.0	Unfit.
1215 Vine street.....	" 24	3.636	Trace.	0.00750	0.0080	0.175	100.0	36.0	14.5	Unfit.
883 Eighth street....	" 26	3.636	Trace.	0.00010	0.0015	0.160	154.0	82.0	13.0	Unfit.
1258 Twenty-first St.	" 29	4.4	Trace.	0.00189	0.0027	0.325	169.0	81.0	13.0	Unfit.
585 Eleventh street.	" 30	0.1	Trace.	0.00960	0.0104	0.490	78.0	34.0	6.5	Unfit.

ANALYSIS OF WELL WATER—PARTS PER 100,000.

MAY.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albumonoid Ammonia.	Oxyd. Matter.	Total Solids.	Loss on Ignition.	Chlorides.	Result for use.
570 Maple street	May 10	0.1330	Trace.	0.0189	0.0650	0.900	114.0	53.0	14.5	Unfit.
1023-27 Winnebago st	" 14	1.9809	Trace.	0.0020	0.0250	0.240	148.0	56.0	10 0	Unfit.
690 Huron street....	" 14	4.2009	Trace.	0.0344	0.0450	0 250	264.0	152.0	34.5	Unfit.
1004 Lloyd street....	" 20	1.0000	None.	0 0146	0.0311	0.613	152.0	64.0	11.5	Unfit.
611 Sixth street.....	" 21	2.0000	Trace.	0.0060	0.0200	0.300	208.0	104.0	19.0	Unfit.
734 Clarence street..	" 25	1.0000	Trace.	0.0002	0.0140	0.150	120.0	60.0	12.5	Suspicious.
2302 Brown street...	" 27	0.1000	Trace.	Trace.	0.0050	0.150	68.0	16.0	3.0	Usable.
583 Hunter place....	" 28	1.6100	Trace.	0.0001	0.0130	0.175	136.0	80.0	15.25	Unfit.
527 Fourteenth St...	" 28	1.0000	Trace.	Trace.	0.0152	0.175	76.0	48.0	12.00	Unfit.

ANALYSIS OF WELL WATER—PARTS PER 100,000.

JUNE.

PLACE	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albumonoid Ammonia.	Oxyd. Matter.	Loss on Ignition.	Chlorides.	Total Solids.	Result for use.
777 Tenth ave	June 3	None.	Trace.	0.0030	0.00314	0.125	8.0	2.00	28.0	Usable.
572 Twenty-first St..	" 11	Trace.	None.	0 0870	0.0380	0 300	15.0	9 25	45.0	Unfit.
358 Grove street. ...	" 19	0 187	None.	0.0300	0.0150	0.212	88.0	80.00	266.0	Unfit.
273 Bellview, spring.	" 17	0.1125	None.	0.0600	0 0700	0.100	30.0	4 00	88.0	Suspicious.
273 Bellview, well...	" 17	0.015	Trace.	0.0480	0.0104	0.100	20.0	4 00	62.0	Suspicious.
Nat'l Home, spring.	" 28	None.	None.	0.0240	0.027	0.100	13.0	1.00	45.0	Unfit.
Nat'l Home well...	" 28	0.2	None.	None.	0.001	0.100	15.0	1.50	57.0	Usable.
820 Twelfth street...	" 30	0.123	Trace.	0.296	0.0320	0.175	18.0	7.25	96.0	Unfit.
724 Canal street. ...	" 30	None.	None.	0.039	0.012	0.075	11.0	1.	32.0	Unfit.

ANALYSIS OF WELL WATER—PARTS PER 100,000.

JULY.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albumonoid Ammonia.	Oxyd. Matter.	Chlorides.	Total Solids.	Loss on Ignition.	Result for use.
1179 Maiden Lane..	July 9	3.0	None.	0.018	0.48	0.50	12.0	68.0	40.0	Unfit for use.
Pine Lake.....	" 10	1.0	None.	0.002	0.24	0.30	1.5	40.0	16.0	Unfit for use.
527 Fourteenth St...	" 13	3.0	Heavy trace.	0.022	0.20	0.20	10 0	80.0	40.0	Unfit for use.
997 Seventh street...	" 14	2.0	Trace.	0.001	0.009	0.10	25.0	224.0	124.0	Unfit for use.
1078 Twelfth street..	" 23	0.9	Trace.	0.002	0.018	0 10	5.5	84.0	40.0	Suspicious.
Wauwatosa.....	" 26	0.1	Trace.	0.003	0.016	0.08	2.0	58.0	26.0	Good.

ANALYSIS OF WELL WATER—PARTS PER 100,000.

AUGUST-

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albumonoid Ammonia.	Oxyd. Matter.	Chlorides.	Total Solids.	Loss on Ignition.	Result for use.
Broadway Menomonee street.	Aug. 4	None.	None.	0.003	None	0.075	None	61.0	20.0	Very good.
Pewaukee, Wis.....	" 4	None.	None.	0.003	0.006	0.115	1.0	42.0	10.0	Very good.
S. Milwaukee, Wis..	" 5	0.02	None.	None.	0.003	0.087	1.0	30.0	10.0	Very good.
728 Clarence street..	" 9	0.187	Heavy trace.	0.011	0.020	0.350	10 0	90.0	35.0	Unfit for use.
629 Twelfth street ..	" 18	0.66	Trace.	0.002	0.015	0.137	40.3	134.0	26 0	Unfit for use.
150 Miller avenue...	" 24	None.	Trace.	0.002	0.022	0.6	3.0	50.0	15 0	Unfit for use.

ANALYSIS OF WELL WATER—PARTS PER 100,000.

SEPTEMBER.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albumonoid Ammonia.	Oxyd. Matter.	Chlorides.	Total Solids.	Loss on Ignition.	Result for use.
997 Seventh street...	Sept. 1	2.0000	Large excess.	0.0020	0.0322	0.113	23.5	232.0	182.0	Unfit.
South Milwaukee...	" 2	0.7000	None.	0.0020	0.0203	0.125	1.5	70.5	23.0	Suspicious.
630 Arthur street....	" 3	0.2664	None.	0.0010	0.1360	0.125	2.5	180.0	56.0	Usable.
510 Walker street...	" 4	0.2310	Trace.	0.0010	0.0090	0.100	7.0	100.0	36.0	Suspicious.
635 Clinton street...	" 5	1.0000	Trace.	0.0020	0.0221	0 400	19.5	40.0	20.0	Unfit.
602 Eighteenth St...	" 7	0.9000	Trace.	0.0195	0.0341	0.137	13.0	160.0	52.0	Unfit.
1030 Teutonia ave...	" 10	3.0000	Heavy trace.	0.0010	0.0205	0.225	11.0	368 0	84.0	Unfit.
933 Racine street....	" 14	5.0000	Large excess.	0.0750	0.0201	0.350	17.0	194.0	76.0	Unfit.
Pine Lake	" 21	0.1000	0.3433	0.0040	0.0070	0.150	1.5	38.0	16.0	Suspicious.
772 Garden street...	" 22	0.0012	Trace.	0.0060	0.0060	0.100	1.5	52.0	20.0	Usable.

ANALYSIS OF WELL WATER—PARTS PER 100,000.

OCTOBER.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albumonoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.	Result for use.
510 Walker street ..	Oct. 13	0.231	Slight traces.	0.004	0.010	0.10	5.0	86.0	36.0	Usable.
1079 Twenty-fourth.	" 16	Large excess.	Large excess.	0.040	0.018	0.23	12.0	106.0	46.0	Unfit.

ANALYSIS OF WELL WATER—PARTS PER 100,000.

NOVEMBER.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albumonoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.	Result for use.
439 American ave...	Nov. 1	0.2	Large excess.	0.004	0.015	0.15	6.75	88.0	44.0	Unfit.
1046 Third street....	" 2	None.	0.001	0.008	0.018	0.11	5.25	104.0	26.0	Usable.
602 Twenty-eighth.	" 3	0.1	0.010	0.019	0.009	0.13	14.50	162.0	52.0	Unfit.
2208 Vliet street.....	" 3	Large excess.	0.010	0.004	0.013	0.20	15.50	148.0	46.0	Unfit.
1455 Seventh street..	" 11	Large excess.	Large excess.	0.003	0.012	0.13	16.00	160.0	62.0	Unfit.
1475 Green Bay ave.	" 15	Large excess.	Slight traces.	0.003	0.009	0.20	10.00	80.0	36.0	Unfit.
696 Twentieth St....	" 19	0.18	Slight traces.	0.001	0.021	0.13	20.00	140.0	80.0	Unfit.
1110 Eighth street...	" 23	0.40	Large excess.	0.003	0.037	0.20	12.00	94.0	12.0	Unfit.

ANALYSIS OF WELL WATER—PARTS PER 100,000.

DECEMBER.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albumonoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.	Result for use.
675 Eighth street...	Dec. 1	Trace.	None.	0.0160	0.0184	0.12	6.00	104.0	39.0	Suspicious.
546 First avenue....	" 7	0.16	Trace.	0.0010	0.0100	0.12	8.75	102.0	20.0	Unfit.
850 Bremen street...	" 15	0.48	Heavy trace.	0.0010	0.0024	0.12	2.00	42.0	10.0	Usable.
753 Eleventh street	" 20	Large excess.	Heavy trace.	0.0240	0.0210	2.20	23.50	142.0	40.0	Unfit.
Uehlein Park.	" 22	0.8	Slight trace.	0.0010	0.0080	0.12	2.00	156.0	10.0	Suspicious.
1373 Sixth street	" 28	Large excess.	Large excess.	0.0010	0.0160	0.25	6.00	80.0	40.0	Unfit.
1383 Sixth street....	" 27	0.25	Slight trace.	0.0001	0.0090	0.10	4.00	74.0	28.0	Usable.

SPECIAL CHEMICAL ANALYSES.

Milk	4,673
Cream	54
Lake water	186
Well water	77
Vinegar	9
Medicines	6
Ice	8
Urine	8
Stomach contents	5
Human milk	2
Butter	5
Milk for poisons	5
Cheese	2
Tea and coffee	2
Meat	3
Flour	1
Canned foods	2
Sugar	1
Maple syrup	1
Bread for poison	1
Miscellaneous	3
Total	5,055

BACTERIOLOGICAL ANALYSES.

Diphtheria	93
Sputum	25
Water and ice	18
Milk	4
Miscellaneous	8
Total	148

Respectfully submitted,

W. C. Bennett, M. D.,

Analyst.

BUREAU OF VITAL STATISTICS.

Walter Kempster, M. D., Commissioner of Health:

DEAR SIR—I present herewith for your consideration a statement of the work of this Bureau for the year 1897.

The number of deaths during the year amounted to 3,606, representing an annual death rate of 13.11 on an estimated population of 275,000. It is a subject for congratulation that, with one exception, each year since 1890 has witnessed a decrease in the number of deaths, notwithstanding the fact that population has increased some 70,000 during the period.

The following table shows for the years from 1891 to 1897 inclusive the estimated population, total deaths and annual death rate:

Year.	Population.	Deaths.	Annual Death Rate.
1891	214,000	4,689	21.91
1892	223,000	4,516	20.25
1893	232,000	4,462	19.23
1894	241,000	4,253	17.64
1895	250,000	3,885	15.54
1896	260,000	3,904	15.00
1897	275,000	3,606	13.11

The decrease in the deaths, as compared with those of 1896, was noted particularly in children under five years of age, and from causes as indicated below:

	Under 1 year.	1 to 5 years.	Total under 5 years.	Diphtheria and Croup.	Diarrhœal Diseases.	Nervous Diseases under 5 years.	Congenital Debility.
1896	1,297	494	1,791	254	298	327	374
1897	1,077	425	1,502	138	244	269	217

As will be seen from the above, the deaths of children under five years number only 1,502, or 41.6 per cent. of the total deaths, against 1,791, or 45.9 per cent. of the total deaths in 1896.

This is the lowest percentage ever attained in this city, and is of itself conclusive evidence of the saving that may be effected in the lives of children by improved sanitary conditions, and particularly by a systematic supervision of the milk and food supply of the city.

During the year there were 298 deaths less, all told, than for 1896, of which number 289, or about 97 per cent., were of children under five years of age.

Of the 3,606 deaths reported, 1,858, or 51.5 per cent., were born in Milwaukee; 395, or about 11 per cent., in other parts of the United States, while the remaining 1,353 were born in the various European countries, the greater number by far—904—being in Germany.

BIRTHS.

The births reported number 7,642, representing an annual birth rate of 27.79 per 1,000 population. Of these, 3,927 were males and 3,715 females.

The greatest number of births, in proportion to population, was from the Fourteenth ward, 888 being reported, representing a birth rate of 46.95 per thousand of its estimated population, while the smallest number, 44, was reported from the Seventh ward, and represents a birth rate of but 6.05 per thousand.

MARRIAGES.

Under the provisions of Chapter 205, Laws of 1897, all marriages solemnized in the City of Milwaukee are now required to be reported to this Department.

In compliance with this law, which became operative June 1st, there were recorded 2,800 marriages during the last seven months of the year.

On the following pages will be found in tabular form an analysis of the vital statistics as recorded during the year.

Respectfully,

J. W. Coon, M. D.,
Registrar.

STATISTICAL TABLES.

In the following tables will be found in detail the number of deaths from various causes not specifically set forth in Table No. 1:

a.

ZYMOTIC DISEASES.

Cerebro Spinal Meningitis	17
Cholera Infantum	118
Cholera Morbus	3
Diarrhoea, Infantile	66
Dysentery	8
Entero Colitis	47
Erysipelas	10
Influenza	23
Puerperal Peritonitis	6
Puerperal Septicaemia	24
Pyaemia	4
Septicaemia	15
Syphilis	4
	345

b.

CONSTITUTIONAL DISEASES.

Anaemia	10
Cancer, Unclassified	21
Cancer of Bowels	12
" " Breast	10
" " Face	2
" " Jaw	2
" " Kidney	1
" " Liver	18
" " Pancreas	3
" " Rectum	5
" " Stomach	73
" " Throat	3
" " Uterus	14
Diabetes Mellitus	17
Rheumatism, Acute	19
Rickets	5
Tubercular Enteritis	11
" Laryngitis	1
" Meningitis	36
" Peritonitis	1
Tuberculosis, General	13
	317

c.

DEVELOPMENTAL DISEASES.

Atelectasis	1
Cyanosis	5
Icterus Neonatorum	2
Malformation	3
Morbus Ceruleus	3
Premature Birth	39
Spina Bifida	3
Trismus Neonatorum	2
	58

d.

DISEASES OF NERVOUS SYSTEM.

Apoplexy	92
Cerebral Arterio-sclerosis	2
" Embolism	3
" Meningitis	22
" Softening	11
" Tumor	1
Cerebritis	1
Convulsions	191
Dementia	1

Epilepsy	9
Hemiplegia	3
Hydrocephalus	10
Insanity	2
Locomotor Ataxia	2
Meningitis	66
Myelitis	10
Neurasthenia	1
Paralysis	7
Spinal Meningitis	4
Tetanus	3
Tabes Dorsalis	2
	443

e.

DISEASES OF GENITO-URINARY SYSTEM.

Bright's Disease	76
Cystitis	15
Nephritis, Acute	30
Prostatitis	4
Pyelo-nephritis	4
Rupture of Bladder	1
Tumor of Bladder	1
Uraemia	6
Urinary Fistule	1
	138

f.

DISEASES OF CIRCULATORY SYSTEM.

Aneurism of Aorta	4
Angina Pectoris	6
Arterial Sclerosis	20
Cardiac Dilatation	4
Cardiac Hypertrophy	1
Endo-carditis	21
Fatty Degeneration of Heart	22
Myo-carditis	4
Pericarditis	12
Phlebitis	2
Rupture of Heart	3
Valvular Heart Disease	143
	242

g.

DISEASES, ETC., OF FEMALE REPRODUCTIVE SYSTEM.

Abortion	4
Difficult Labor	2
Menorrhagia	1
Ovarian Tumor	2
Post Partum Hemorrhage	3
Puerperal Eclampsia	3
Ruptured Pyosalpinx	3
Uterine Tumor	7
	25

h.

DISEASES OF RESPIRATORY SYSTEM.

Asthma	12
Broncho-pneumonia	40
Coryza	1
Emphysema	4
Empyema	5
Haemoptysis	1
Laryngitis	8
Oedema of Glottis	1
" " Lungs	4
Plurisy	11
Pleuro-pneumonia	10
Pulmonary Gangrene	1
Tonsillitis	2
	98

i.

DISEASES OF DIGESTIVE SYSTEM.

Abscess of Gall Bladder	1
Appendicitis	30
Biliary Calculi	1
Cirrhosis of Liver	24
Colitis	2
Dentition	3
Enteritis	30
Gastric Ulcer	10
Gastritis	48
Gastro-enteritis	119
Hepatitis	16
Hepatic Tumor	1
Hernia, Strangulated	11
Intestinal Hemorrhage	1
" Obstruction	19
Intussusception	5
Peritonitis	51
Stomatitis	4
	376

j.

DEATHS DUE TO VIOLENCE.

Accidents, Unclassified	31
Asphyxia by Illuminating Gas	4
Burns and Scalds	14
Cut Throat—Suicide	4
Drowning, Accidental	22
" Suicide	10
Falls	3
Foreign Body in Air Passages	1
Fracture of Leg	3
" " Skull	2
" " Spine	1
Gun Shot Wound, Accidental	3
" " " Homicide	2
" " " Suicide	15
Hanging, Suicide	9
Meningitis Traumatic	3
Poisoning, Accidental	3
" Suicide	22
Peritonitis, Traumatic	3
Railroad Accidents	16
Street Car Accidents	7
Suffocation, Accidental	6
Suicide by Illuminating Gas	3
	187

k.

OTHER CAUSES, NOT INCLUDED IN FOREGOING.

Abdominal Tumor	2
Abscess	1
Atrophy, Infantile	5
Carbuncle	2
Cellulitis	3
Dropsy	2
Epistaxis	1
Exophthalmic Goitre	3
Ill Defined	32
Inanition	32
Infantile Debility	70
Malnutrition	1
Marasmus, Infantile	41
Otitis Media	1
Senile Gangrene	3
Sunstroke	12
Tumors, Unclassified	2
	213

TABLE No. 1.

Showing the Reported Mortality, according to Cause, Sex, Social Condition and Age, for the year 1897.
The Annual Death Rate was 13.11 per 1,000 on an estimated population of 275,000.
The Annual Death Rate for 1896 was 15.00 per 1,000 population.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition			AGE.												
		Male.	Female.	Single.	Married.	Widowed.	Under 1 Year.	1 to 5 years.	5 to 10 years.	10 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	70 to 80 years.	80 to 90 years.	90 to 100 years.	Over 100.
Total	3,606	1,907	1,699	2,072	1,170	364	1,077	425	121	165	286	291	263	243	263	320	136	15	1
Diphtheria	106	56	50	104	2	.....	1	56	40	6	1	1	1	.....	.....	.....	.....	.....	....
Croup	32	17	15	32	.....	.....	2	23	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	....
Scarlet Fever	3	1	2	3	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....
Typhoid Fever	31	17	14	19	9	3	.....	3	2	9	7	5	3	1	.....	.....	.....	1	....
Small Pox	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....
Typhus Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....
Measles	36	21	15	36	.....	.....	8	27	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	....
Whooping Cough	19	12	7	19	.....	.....	13	5	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	....
Diarrhœal Diseases	244	135	109	240	4	.....	195	43	2	.....	1	.....	.....	.....	2	.....	1	.....	....
Phthisis Pulmonalis	346	162	184	155	173	18	4	3	4	44	122	79	44	28	14	4	.....	.....	....

Other Tubercular Diseases..	102	61	41	67	29	6	17	19	7	9	18	7	9	6	9	1	.....	....
Malarial Fevers.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Diseases of Nervous System.	444	252	192	305	104	35	213	56	12	12	7	15	14	22	31	47	15	....
Diseases of Circulatory System.	242	129	113	50	138	54	8	3	4	10	11	24	27	41	47	54	13	....
Bronchitis.....	193	106	87	136	36	21	92	36	2	2	2	4	5	5	9	23	11	2
Pneumonia.....	239	124	115	145	71	23	71	46	8	6	9	19	19	11	20	22	8	....
Other Respiratory Diseases.	98	49	49	66	20	12	28	24	5	3	1	4	4	7	10	11	1	....
Diseases of Digestive System	376	195	181	245	103	28	155	31	10	29	23	27	27	23	21	22	8	....
Diseases of Genito Urinary System.	138	74	64	32	83	23	6	8	4	3	9	11	27	15	19	31	5	....
Congenital Debility.....	217	116	101	217	....	....	211	6	....	....	....	....	....	....	....	....	....	....
Senile Debility.....	123	53	70	5	49	69	....	....	....	....	....	....	....	....	5	45	60	12	1
Suicides.....	62	51	11	12	44	6	....	....	....	2	10	12	12	12	10	4	....	....
Other Violent Deaths.....	125	104	21	59	58	8	6	16	9	10	16	22	24	11	5	3	3	....
All Other Causes.....	430	172	258	125	247	58	47	17	4	19	49	61	47	61	61	53	11	....

TABLE No. 2.

Showing the Reported Mortality, according to Cause, Age, Sex and Social Condition for the month of January, 1897.

The Annual Death Rate per 1,000 for the month was 16.06 on an estimated population of 275,000.

During the month there were 60 deaths more than for the corresponding month of 1896.

	Total.	Males.	Females.	Single.	Married.	Widowed.	Under 1 year.	From 1 to 5 years.	5 to 10 years.	10 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	70 to 80 years.	80 to 90 years.	90 to 100 years.	Over 100 years.	Total same month last year.
Total, all causes	368	193	175	223	117	28	120	58	13	14	22	24	28	24	21	29	13	2	.....	308
Diphtheria	18	7	11	18	.....	.....	.....	10	7	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	21
Croup	6	3	3	6	.....	.....	1	4	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7
Scarlet fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Typhoid Fever	6	2	4	4	4	.....	.....	2	.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	6
Small-pox	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Typhoid Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Measles	15	10	5	15	.....	.....	3	11	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Whooping Cough	1	.....	1	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diarrhoeal Diseases	7	3	4	7	.....	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6
Phthisis	25	13	12	8	16	1	.....	.....	.....	2	9	6	7	1	.....	.....	.....	.....	.....	26
Other Tuberculár Dise's	9	4	5	4	5	.....	2	1	1	.....	1	1	.....	1	2	.....	.....	.....	.....	13

Malarial Fevers	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nervous System	54	29	25	39	13	2	30	5	1	1	1	2	3	4	2	5	.....	.....	.....	46
Heart Diseases	25	18	7	8	14	3	4	1	.....	2	2	1	2	3	5	5	.....	.....	.....	22
Bronchitis	40	25	15	31	6	3	21	8	.....	1	.....	1	1	2	1	3	2	.....	.....	11
Pneumonia	26	13	13	15	8	3	5	8	.....	1	1	1	1	2	2	4	1	.....	.....	24
Other Diseases of the Respiratory Organs.	10	4	6	6	3	1	4	2	.....	.....	.....	1	1	.....	2	.....	.....	.....	.....	10
Diseases of Digestive System.	21	8	13	15	4	2	9	1	2	3	1	2	1	.....	.....	.....	2	.....	.....	21
Urinary System	15	6	9	2	11	2	.....	2	.....	.....	1	.....	4	3	2	3	.....	.....	.....	9
*Congenital Debility	27	14	13	27	.....	.....	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	31
Old age	13	5	8	1	5	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	7	2	.....	8
Suicides	1	1	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Other violent deaths	8	7	1	6	2	.....	1	3	.....	1	1	.....	1	1	.....	.....	.....	.....	.....	7
All other causes	41	21	20	10	27	4	4	1	.....	.....	5	7	7	6	5	5	1	.....	.....	39

* Including Premature Births, Atrophy, Inanition, Infantile Debility, Marasmus, Atelectasis and Preternatural Births.

TABLE No. 3.

Showing the Reported Mortality, according to Cause, Age, Sex and Social Condition for the month of February, 1897.

The Annual Death Rate per 1,000 for the month was 14.79 on an estimated population of 275,000.

During the month there were 32 deaths more than for the corresponding month of 1896.

	Total.	Males.	Females.	Single.	Married.	Widowed.	Under 1 year.	From 1 to 5 years.	5 to 10 years.	10 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	70 to 80 years.	80 to 90 years.	90 to 100 years.	Over 100 years.	Total same month last year.
Total, all causes	339	165	174	187	112	40	85	55	10	11	26	27	29	22	23	33	17	1	.....	307
Diphtheria	5	3	2	5	.....	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15
Croup	5	1	4	5	.....	.....	.....	2	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4
Scarlet Fever	1	1	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Typhoid Fever	1	.....	1	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7
Small-pox	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Typhus Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Measles	10	5	5	10	.....	.....	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Whooping Cough	2	1	1	2	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Diarrhoeal Diseases	1	1	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7
Phthisis	29	11	18	14	14	1	1	1	2	2	10	4	6	1	1	1	.....	.....	.....	25
Other Tubercular Dise's.	15	11	4	12	3	.....	3	4	1	1	3	1	2	.....	.....	.....	.....	.....	.....	10

Malarial Fevers	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nervous System	44	25	19	37	5	2	25	8	2	1	1	.....	1	1	2	3	.....	.....	.....	35
Heart Disease	36	13	23	6	22	8	1	.....	.....	.....	2	11	2	4	6	9	1	.....	.....	17
Bronchitis	27	18	9	21	4	2	15	6	.....	.....	.....	.....	1	1	.....	1	2	1	.....	14
Pneumonia	39	18	21	22	12	5	12	7	1	1	.....	3	1	2	5	5	2	.....	.....	25
Other Diseases of the Respiratory Organs.	8	3	5	6	.....	2	2	2	.....	.....	.....	.....	.....	1	1	2	.....	.....	.....	11
Diseases of Digestive System.	18	7	11	8	9	1	5	2	.....	1	1	3	2	.....	2	2	.....	.....	.....	27
Urinary System	8	4	4	2	5	1	.....	.....	.....	2	.....	1	1	1	1	2	.....	.....	.....	15
* Congenital Debility	17	9	8	17	.....	.....	15	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	26
Old Age	15	6	9	.....	6	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	10	.....	.....	11
Suicides	6	5	1	.....	6	.....	.....	.....	.....	.....	.....	.....	3	2	.....	1	.....	.....	.....	4
Other violent deaths	8	6	2	1	6	1	.....	1	.....	.....	1	1	4	.....	1	.....	.....	.....	.....	4
All other causes	44	17	27	16	20	8	3	3	1	3	8	3	6	9	4	2	2	.....	.....	48

* Including Premature Births, Atrophy, Inanition, Infantile Debility, Marasmus, Atelectasis and Preternatural Births.

TABLE No. 4.

Showing the Reported Mortality, according to Cause, Age, Sex and Social Condition for the month of March, 1897.

The Annual Death Rate per 1,000 for the month was 14.62 on an estimated population of 275,000.

During the month there were 22 deaths more than for the corresponding month of 1896.

	Total.	Males.	Females.	Single.	Married.	Widowed.	Under 1 year.	From 1 to 5 years.	5 to 10 years.	10 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	70 to 80 years.	80 to 90 years.	90 to 100 years.	Over 100 years.	Total same month last year.
Total, all causes	335	187	148	190	98	47	81	47	14	20	24	28	14	20	28	35	23	.....	1	313
Diphtheria	11	9	2	11	.....	.....	.....	6	4	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	14
Croup	7	4	3	7	.....	.....	1	5	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Scarlet Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Typhoid Fever	3	2	1	2	1	.....	.....	.....	1	.....	1	1	.....	.....	.....	.....	.....	.....	.....	3
Small-pox	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Typhus Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Measles	6	3	3	6	.....	.....	2	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Whooping Cough	1	1	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Diarrhoeal Diseases	3	1	2	3	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4
Phthisis	29	15	14	14	14	1	.....	1	1	4	10	6	1	5	1	.....	.....	.....	.....	35
Other Tubercular Dise's.	10	8	2	6	3	1	2	3	.....	.....	1	.....	.....	.....	4	.....	.....	.....	.....	11

Malarial Fevers	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nervous System	47	26	21	32	14	1	19	8	1	4	.....	2	.....	2	3	2	6	.....	.....	42
Heart Diseases	15	8	7	2	6	7	.....	.....	.....	2	.....	1	3	3	.....	4	2	.....	.....	23
Bronchitis	24	14	10	18	4	2	12	6	.....	.....	.....	.....	1	.....	1	4	.....	.....	.....	9
Pneumonia	29	18	11	18	9	2	6	8	1	.....	1	3	3	1	2	2	2	.....	.....	24
Other Diseases of the Respiratory Organs.	10	6	4	8	2	.....	1	2	3	1	.....	.....	1	.....	1	1	.....	.....	.....	8
Diseases of Digestive System.	23	11	12	15	4	4	5	3	1	3	2	2	1	1	4	1	.....	.....	.....	28
Urinary System	13	9	4	2	6	5	.....	.....	1	.....	1	1	1	.....	2	7	.....	.....	.....	19
* Congenital Debility	25	18	7	25	.....	.....	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	29
Old Age	19	8	11	.....	8	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	10	.....	1	16
Suicides	5	3	2	2	2	1	.....	.....	.....	1	1	1	.....	.....	2	.....	.....	.....	.....	3
Other violent deaths	6	5	1	3	1	2	.....	.....	.....	.....	2	2	.....	.....	2	.....	.....	.....	.....	10
All other causes	49	18	31	15	24	10	5	1	.....	3	5	9	3	8	6	6	3	.....	.....	33

* Including Premature Births, Atrophy, Inanition, Infantile Debility, Marasmus, Atelectasis and Preternatural Births.

TABLE No. 5.

Showing the Reported Mortality, according to Cause, Age, Sex and Social Condition for the month of April, 1897.

The Annual Death Rate per 1,000 for the month was 12.61 on an estimated population of 275,000.

During the month there were 33 deaths less than for the corresponding month of 1896.

	Total.	Males.	Females.	Single.	Married.	Widowed.	Under 1 year.	From 1 to 5 years.	5 to 10 years.	10 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	70 to 80 years.	80 to 90 years.	90 to 100 years.	Over 100 years.	Total same month last year.
Total, all causes	289	174	115	166	89	34	85	23	11	16	23	21	25	21	28	24	9	3	.....	322
Diphtheria	5	4	1	5	.....	.....	.....	3	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8
Croup	1	1	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4
Scarlet Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Typhoid Fever	6	5	1	3	1	2	.....	.....	1	2	.....	1	.....	1	.....	.....	.....	1	.....	5
Small-pox	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Typhus Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Measles	4	2	2	4	.....	.....	3	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Whooping Cough	1	1	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Diarrhoeal Diseases	6	5	1	6	.....	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11
Phthisis	36	20	16	21	12	3	.....	.....	.....	6	11	8	6	3	2	.....	.....	.....	.....	35
Other Tubercular Dise's.	7	4	3	6	1	.....	2	2	1	.....	1	.....	.....	.....	1	.....	.....	.....	.....	12

Malarial Fevers	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Nervous System	40	20	20	30	8	2	21	2	2	3	1	2	2	2	1	3	1	.....	.....	52
Heart Diseases	20	12	8	6	9	5	.....	1	1	.....	2	.....	3	2	5	4	2	.....	.....	22
Bronchitis	17	12	5	12	4	1	10	2	.....	.....	.....	.....	.....	1	.....	4	.....	.....	.....	15
Pneumonia	23	20	3	17	4	2	7	7	1	.....	.....	2	1	1	3	1	.....	.....	.....	23
Other Diseases of the Respiratory Organs.	6	4	2	2	2	2	1	1	.....	.....	.....	.....	.....	1	3	.....	.....	.....	.....	10
Diseases of Digestive System.	24	14	10	14	9	1	9	.....	2	1	4	1	1	3	3	.....	.....	.....	.....	27
Urinary System	11	7	4	2	6	3	.....	.....	.....	.....	.....	1	2	2	3	2	1	.....	.....	11
* Congenital Debility	23	13	10	23	.....	.....	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	26
Old Age	11	5	6	.....	4	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	5	2	.....	8
Suicides	7	6	1	1	6	.....	.....	.....	.....	.....	1	1	3	.....	2	.....	.....	.....	.....	5
Other violent deaths	8	7	1	5	3	.....	1	1	1	.....	1	2	2	.....	.....	.....	.....	.....	.....	7
All other causes	33	12	21	7	20	6	1	2	.....	4	2	3	5	5	5	6	.....	.....	.....	37

* Including Premature Births, Atrophy, Inanition, Infantile Debility, Marasmus, Atelectasis and Preternatural Births.

TABLE No. 6.

Showing the Reported Mortality, according to Cause, Age, Sex and Social Condition for the month of May, 1897.

The Annual Death Rate per 1,000 for the month was 12.65 on an estimated population of 275,000.

During the month there were 30 deaths less than for the corresponding month of 1896.

	Total.	Males.	Females.	Single.	Married.	Widowed.	Under 1 year.	From 1 to 5 years.	5 to 10 years.	10 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	70 to 80 years.	80 to 90 years,	90 to 100 years.	Over 100 years.	Total same month last year.
Total, all cases	290	155	135	159	99	32	79	33	12	9	26	26	16	21	31	27	10	.....	.....	320
Diphtheria	9	5	4	9	.....	.....	.....	5	3	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	13
Croup	1	1	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4
Scarlet Fever	1	.....	1	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Typhoid Fever	2	1	1	.....	2	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	1
Small-pox	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Typhus Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Measles	1	1	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Whooping Cough	1	.....	1	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diarrhoeal Diseases	4	1	3	4	.....	.....	3	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12
Phthisis	30	14	16	14	12	4	1	.....	.....	3	11	9	1	4	1	.....	.....	.....	.....	32
Other Tubercular Dise's.	10	4	6	6	1	2	.....	3	.....	2	2	.....	1	1	1	.....	.....	.....	.....	15

Malarial Fevers	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nervous System	34	19	15	25	6	3	18	5	1	.....	.....	.....	.....	.....	4	6	.....	.....	.....	45
Heart Diseases	22	12	10	6	11	5	.....	1	.....	1	1	2	3	1	8	4	1	.....	.....	23
Bronchitis	14	7	7	9	4	1	6	3	.....	.....	.....	.....	.....	.....	1	2	2	.....	.....	17
Pneumonia	17	7	10	12	5	.....	5	4	1	1	1	2	.....	1	2	.....	.....	.....	.....	14
Other Diseases of the Respiratory Organs.	6	3	3	1	3	2	1	.....	.....	.....	.....	1	.....	1	1	1	1	.....	.....	5
Diseases of Digestive System.	27	14	13	12	12	3	9	2	.....	1	1	2	3	3	2	2	2	.....	.....	20
Urinary System	11	5	6	6	4	1	1	1	2	.....	.....	.....	3	.....	4	.....	.....	.....	.....	13
* Congenital Debility	30	17	13	30	.....	.....	28	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	33
Old Age	11	9	2	.....	7	4	.....	.....	.....	.....	.....	.....	.....	.....	2	5	4	.....	.....	13
Suicides	5	4	1	1	3	1	.....	.....	.....	.....	.....	3	.....	1	.....	1	.....	.....	.....	6
Other violent deaths	19	17	2	8	9	2	.....	3	2	.....	3	3	3	2	1	2	.....	.....	.....	15
All other causes	35	14	21	12	20	3	6	1	2	1	5	4	1	7	4	4	.....	.....	.....	39

* Including Premature Births, Atrophy, Inanition, Infantile Debility, Marasmus, Atelectasis and Preternatural Births.

TABLE No. 7.

Showing the Reported Mortality, according to Cause, Age, Sex and Social Condition for the month of June, 1897.

The Annual Death Rate per 1,000 for the month was 10.69 on an estimated population of 275,000.

During the month there were 12 deaths less than for the corresponding month of 1896.

	Total.	Males.	Females.	Single.	Married.	Widowed.	Under 1 year.	From 1 to 5 years.	5 to 10 years.	10 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	70 to 80 years.	80 to 90 years.	90 to 100 years.	Over 100 years.	Total same month last year.
Total, all causes	245	122	123	138	82	25	76	21	6	19	21	22	14	18	18	31	8	.....	.....	257
Diphtheria	5	3	2	5	.....	.....	.....	3	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5
Croup	1	1	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Scarlet Fever	1	.....	1	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Typhoid Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Small-pox	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Typhus Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Measles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Whooping Cough	2	2	.....	2	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Diarrhoeal Diseases	9	5	4	8	1	.....	6	2	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	19
Phthisis	24	15	9	13	10	1	1	.....	.....	2	11	4	4	2	.....	.....	.....	.....	.....	21
Other Tubercular Dise's.	8	4	4	5	3	.....	1	.....	1	2	1	2	1	.....	.....	.....	.....	.....	.....	12

Nervous System	30	16	14	19	9	2	14	4	.....	.....	1	1	.....	2	3	3	2	.....	.....	30
Malarial Fevers	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Heart Diseases	22	11	11	6	10	6	1	.....	.....	2	.....	1	1	6	2	7	2	.....	.....	15
Bronchitis	16	5	11	10	3	3	4	6	.....	.....	.....	.....	.....	.....	1	3	2	.....	.....	7
Pneumonia	11	4	7	6	5	.....	5	1	.....	.....	.....	3	.....	1	.....	1	.....	.....	.....	7
Other Diseases of the Respiratory Organs.	5	2	3	2	2	1	1	.....	1	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	9
Diseases of Digestive System.	30	17	13	18	9	3	11	.....	1	3	1	2	3	3	3	3	.....	.....	.....	25
Urinary System	11	3	8	3	5	3	.....	3	.....	.....	.....	2	3	.....	.....	3	.....	.....	.....	9
* Congenital Debility	24	12	12	24	.....	.....	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	28
Old Age	3	1	2	1	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	2	.....	.....	6
Sucides	8	6	2	1	6	1	.....	.....	.....	.....	3	1	1	1	2	.....	.....	.....	.....	5
Other violent deaths	7	5	2	4	3	.....	1	1	.....	.....	1	2	1	1	.....	.....	.....	.....	.....	16
All other causes	28	10	18	9	16	3	5	.....	.....	1	2	4	.....	2	7	7	.....	.....	.....	39

* Including Premature Births, Atrophy, Inanition, Infantile Debility, Marasmus, Atelectasis and Preternatural Births.

TABLE No. 8.

Showing the Reported Mortality, according to Cause, Age, Sex and Social Condition for the month of July, 1897.

The Annual Death Rate per 1,000 for the month was 11.91 on an estimated population of 275,000.

During the month there were 143 deaths less than for the corresponding month of 1896.

	Total.	Males.	Females.	Single.	Married.	Widowed.	Under 1 year.	From 1 to 5 years.	5 to 10 years.	10 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	70 to 80 years.	80 to 90 years.	90 to 100 years.	Total same month last year.
Total, all causes	273	137	136	164	95	14	83	24	8	18	27	25	19	22	14	24	9	.....	416
Diphtheria	7	3	4	7	.....	.....	.....	2	4	1	.....	.....	.....	.....	.....	.....	.....	.....	9
Croup	3	2	1	3	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Scarlet Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Typhoid Fever	3	2	1	2	1	.....	.....	.....	.....	.....	1	1	1	.....	.....	.....	.....	.....	3
Small-pox	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Typhus Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Measles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Whooping Cough	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Diarrhoeal Diseases	35	16	19	34	1	.....	30	4	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	90
Phthisis	23	11	12	12	11	.....	.....	1	.....	6	8	3	3	1	1	.....	.....	.....	28
Other Tubercular Diseases	8	4	4	5	3	.....	.....	3	.....	.....	3	.....	1	1	.....	.....	.....	.....	7

Malarial Fevers	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nervous System	37	19	18	25	10	2	17	4	1	.....	2	2	.....	2	1	8	.....	.....	46
Heart Diseases	17	10	7	6	9	2	1	.....	.....	2	.....	1	2	4	4	3	.....	.....	20
Bronchitis	5	1	4	3	2	.....	3	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	23
Pneumonia	7	2	5	4	3	.....	3	.....	1	.....	.....	1	.....	.....	1	1	.....	.....	8
Other Diseases of the Respiratory Organs.	9	4	5	6	1	2	2	3	.....	.....	.....	.....	.....	2	1	1	.....	.....	4
Diseases of Digestive System	33	16	17	21	10	2	14	1	1	2	4	1	4	1	1	3	1	.....	55
Urinary System	15	9	6	6	9	.....	2	.....	.....	1	2	.....	3	1	2	3	1	.....	8
* Congenital Debility	7	2	5	7	.....	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	40
Old Age	7	1	6	2	2	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	4	.....	11
Suicides	4	3	1	1	3	.....	.....	.....	.....	.....	.....	2	1	1	.....	.....	.....	.....	8
Other violent deaths	12	11	1	8	4	.....	.....	1	1	5	.....	3	1	1	.....	.....	.....	.....	16
All other causes	41	21	20	12	26	3	4	2	.....	1	7	10	3	7	3	2	2	.....	33

* Including Premature Births, Atrophy, Inanition, Infantile Debility, Marasmus, Atelectasis and Preternatural Births.

TABLE No. 9.

Showing the Reported Mortality, according to Cause, Age, Sex and Social Condition for the month of August, 1897.

The Annual Death Rate per 1,000 for the month was 14.92 on an estimated population of 275,000.

During the month there were 74 deaths less than for the corresponding month of 1896.

	Total.	Males.	Females.	Single.	Married.	Widowed.	Under 1 year.	From 1 to 5 years.	5 to 10 years.	10 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	70 to 80 years.	80 to 90 years.	90 to 100 years.	Total same month last year.
Total, all causes	342	187	155	232	87	23	156	40	3	16	23	16	22	15	17	21	10	3	416
Diphtheria	2	1	1	2				2											13
Croup	1		1	1				1											1
Scarlet Fever																			1
Typhoid Fever	2	1	1	2						1	1								4
Small-pox																			
Typhus Fever																			
Measles																			1
Whooping Cough	2	2		2			1	1											3
Diarrhoeal Diseases	91	56	35	91			74	17											97
Phthisis	22	10	12	9	13					3	11	3	3	1		1			21
Other Tubercular Diseases	7	5	2	6	1		1		1	2	2	1							5

Malarial Fevers	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nervous System	29	18	11	17	8	4	13	3	1	.....	.....	.....	.....	3	3	3	3	.....	53
Heart Diseases	13	7	6	2	9	2	.....	.....	.....	.....	1	1	2	1	4	4	.....	.....	16
Bronchitis	5	2	3	3	1	1	1	1	.....	.....	.....	1	1	.....	.....	.....	1	.....	16
Pneumonia	10	4	6	3	5	2	2	1	.....	.....	1	1	2	1	.....	1	1	.....	12
Other Diseases of the Respiratory Organs.	4	1	3	3	.....	1	1	1	.....	1	.....	.....	.....	.....	.....	1	.....	.....	2
Diseases of Digestive System	60	31	29	48	10	2	34	7	1	4	2	2	4	2	3	1	.....	.....	45
Urinary System	9	6	3	1	7	1	.....	1	.....	.....	.....	1	2	2	2	.....	1	.....	6
Congenital Debility	20	8	12	20	.....	.....	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47
Old Age	8	2	6	.....	4	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	2	3	9
Suicides	6	6	.....	2	3	1	.....	.....	.....	1	.....	.....	2	2	.....	1	.....	.....	6
Other violent deaths	16	12	4	8	7	1	1	4	.....	2	3	2	2	1	.....	.....	1	.....	16
All other causes	35	15	20	12	19	4	8	1	.....	2	2	4	4	2	5	6	1	.....	42

* Including Premature Births, Atrophy, Inanition, Infantile Debility, Marasmus, Atelectasis and Preternatural Births.

TABLE No. 10.

Showing the Reported Mortality, according to Cause, Age, Sex and Social Condition for the month of September, 1897.

The Annual Death Rate per 1,000 for the month was 13.09 on an estimated population of 275,000.

During the month there were 11 deaths more than for the corresponding month of 1896.

	Total.	Males.	Females.	Single.	Married.	Widowed.	Under 1 year.	From 1 to 5 years.	5 to 10 years.	10 to 20 years	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	70 to 80 years.	80 to 90 years.	90 to 100 years.	Total same month last year.
Total, all causes	300	161	139	186	85	29	105	36	12	15	24	22	23	16	13	23	11	.....	289
Diphtheria	7	3	4	6	1	.....	1	.....	4	1	.....	1	.....	.....	.....	.....	.....	.....	19
Croup	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11
Scarlet Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Typhoid Fever	2	1	1	.....	1	1	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	2
Small-pox	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Typhus Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Measles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Whooping Cough	1	.....	1	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Diarrhoeal Diseases	53	29	24	53	.....	.....	40	12	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	29
Phthisis	25	14	11	9	14	2	.....	.....	.....	2	11	4	4	1	3	.....	.....	.....	20
Other Tubercular Diseases	13	10	3	9	4	.....	3	2	1	1	2	.....	3	.....	.....	1	.....	.....	7

Malarial Fevers	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nervous System	32	20	12	22	6	4	16	4	1	.....	.....	3	2	.....	1	3	2	.....	36
Heart Diseases	14	6	8	1	10	3	.....	.....	1	.....	.....	.....	1	4	3	3	2	.....	18
Bronchitis	6	3	3	4	1	1	2	.....	.....	1	1	.....	.....	.....	2	.....	.....	.....	12
Pneumonia	9	6	3	7	1	1	4	2	1	.....	.....	.....	1	.....	.....	.....	1	.....	12
Other Diseases of the Respiratory Organs.	8	2	6	7	1	.....	3	3	.....	1	.....	1	.....	.....	.....	.....	.....	.....	11
Diseases of Digestive System	54	31	23	40	9	5	21	8	2	7	1	3	1	4	.....	5	2	.....	26
Urinary System	9	3	6	4	3	2	1	2	.....	.....	1	.....	2	2	.....	1	.....	.....	9
* Congenital Debility	10	6	4	10	.....	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25
Old Age	8	6	2	.....	5	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	4	.....	9
Suicides	4	3	1	.....	4	.....	.....	.....	.....	.....	3	.....	.....	1	.....	.....	.....	.....	5
Other violent deaths	10	8	2	3	6	1	1	.....	1	1	.....	3	3	1	.....	.....	.....	.....	14
All other causes	35	10	25	10	19	6	3	2	.....	1	4	7	5	3	4	6	.....	.....	22

* Including Premature Births, Atrophy, Inanition, Infantile Debility, Marasmus, Atelectasis and Preternatural Births.

TABLE No. 11.

Showing the Reported Mortality, according to Cause, Age, Sex and Social Condition for the month of October, 1897.

The Annual Death Rate per 1,000 for the month was 10.78 on an estimated population of 275,000.

During the month there were 49 deaths less than for the corresponding month of 1896.

	Total.	Males.	Females.	Single.	Married.	Widowed.	Under 1 year.	From 1 to 5 years.	5 to 10 years.	10 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	70 to 80 years.	80 to 90 years.	90 to 100 years.	Total same month last year.
Total, all causes	247	132	115	149	85	13	71	33	11	12	24	23	16	14	21	19	3	.....	296
Diphtheria	17	8	9	16	1	.....	.....	8	6	2	.....	.....	1	.....	.....	.....	.....	.....	34
Croup	3	1	2	3	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14
Scarlet Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Typhoid Fever	2	.....	2	2	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	5
Small-pox	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Typhus Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Measles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Whooping Cough	3	1	2	3	.....	.....	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Diarrhoeal Diseases	19	12	7	17	2	.....	12	4	1	.....	.....	.....	.....	.....	2	.....	.....	.....	8
Phthisis	34	14	20	15	18	1	.....	.....	.....	5	13	10	1	4	.....	1	.....	.....	21
Other Tubercular Diseases	4	1	3	3	1	.....	1	1	1	.....	.....	.....	.....	.....	1	.....	.....	.....	7

Malarial Fevers	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nervous System	30	19	11	20	7	3	15	3	1	1	.....	1	2	2	1	4	.....	.....	37
Heart Diseases	13	9	4	4	7	2	1	.....	1	.....	1	1	1	5	3	.....	.....	.....	7
Bronchitis	5	3	2	1	4	.....	1	.....	.....	.....	.....	.....	.....	.....	2	2	.....	.....	18
Pneumonia	16	10	6	9	5	2	6	1	.....	.....	1	2	3	.....	.....	3	.....	.....	19
Other Diseases of the Respiratory Organs.	5	3	2	4	1	.....	2	2	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	9
Diseases of Digestive System	33	16	17	26	7	.....	17	5	.....	1	3	2	3	.....	1	1	.....	.....	13
Urinary System	10	7	3	1	9	.....	.....	.....	.....	.....	2	2	2	.....	1	3	.....	.....	11
* Congenital Debility	14	6	8	14	.....	.....	12	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	31
Old Age	3	1	2	.....	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	6
Suicides	4	3	1	2	2	.....	.....	.....	.....	.....	.....	1	1	.....	2	.....	.....	.....	4
Other violent deaths	9	8	1	5	4	.....	.....	1	1	1	2	1	1	1	1	.....	.....	.....	20
All other causes	23	10	13	4	16	3	2	2	.....	1	1	3	1	2	7	4	.....	.....	28

* Including Premature Births, Atrophy, Inanition, Infantile Debility, Marasmus, Atelectasis and Preternatural Births.

TABLE No. 12.

Showing the Reported Mortality, according to Cause, Age, Sex and Social Condition for the month of November, 1897.

The Annual Death Rate per 1,000 for the month was 11.95 on an estimated population of 275,000.

During the month there were 41 deaths less than for the corresponding month of 1896.

	Total.	Males.	Females.	Single.	Married.	Widowed.	Under 1 year.	From 1 to 5 years.	5 to 10 years.	10 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	70 to 80 years.	80 to 90 years.	90 to 100 years.	Total same month last.
Total, all causes	274	131	143	133	103	38	73	23	11	9	16	33	25	21	24	27	9	3	315
Diphtheria	7	3	4	7	.....	.....	.....	3	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	22
Croup	2	1	1	2	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Scarlet Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Typhoid Fever	2	2	.....	1	1	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	4
Small-pox	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Typhus Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Measles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7
Whooping Cough	1	1	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diarrhoeal Diseases	11	2	9	11	.....	.....	9	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11
Phthisis	35	13	22	11	23	1	.....	.....	1	3	7	13	5	2	3	1	.....	.....	36
Other Tubercular Diseases	5	3	2	2	3	.....	1	.....	.....	1	.....	1	1	1	.....	.....	.....	.....	4

Malarial Fevers	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nervous System	35	20	15	22	6	7	14	6	1	.....	.....	1	2	2	5	4	.....	.....	43
Heart Diseases	24	13	11	2	15	7	.....	.....	1	.....	.....	4	3	4	5	5	2	.....	13
Bronchitis	12	7	5	8	1	3	5	2	1	.....	.....	1	.....	.....	.....	1	1	1	24
Pneumonia	22	5	17	13	5	4	10	2	.....	1	.....	.....	3	1	3	2	.....	.....	23
Other Diseases of the Respiratory Organs.	10	7	3	6	3	1	2	2	1	.....	.....	1	2	1	.....	1	.....	.....	4
Diseases of Digestive System	27	13	14	19	7	1	15	2	.....	2	1	3	1	1	.....	1	1	.....	26
Urinary System	11	7	4	1	8	2	.....	.....	1	.....	.....	2	2	1	2	3	.....	.....	11
* Congenital Debility	12	7	5	12	.....	.....	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	37
Old Age	11	4	7	1	4	6	.....	.....	.....	.....	.....	.....	.....	.....	1	4	4	2	5
Suicides	7	7	.....	2	4	1	.....	.....	.....	.....	2	1	1	1	1	1	.....	.....	7
Other violent deaths	7	7	.....	3	4	.....	.....	.....	1	.....	2	1	1	1	.....	1	.....	.....	8
All other causes	33	9	24	9	19	5	4	2	.....	1	3	5	4	6	4	3	1	.....	27

* Including Premature Births, Atrophy, Inanition, Infantile Debility, Marasmus, Atelectasis and Preternatural Births.

TABLE No. 13.

Showing the Reported Mortality, according to Cause, Age, Sex and Social Condition for the month of December, 1897.

The Annual Death Rate per 1,000 for the month was 13.26 on an estimated population of 275,000.

During the month there were 41 deaths less than for the corresponding month of 1896.

	Total.	Males.	Females.	Single.	Married.	Widowed.	Under 1 year.	From 1 to 5 years.	5 to 10 years.	10 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	70 to 80 years.	80 to 90 years.	90 to 100 years.	Total same month last year.
Total, all causes	304	163	141	145	118	41	63	32	10	15	30	24	32	29	25	27	14	3	345
Diphtheria	13	7	6	13	.....	.....	.....	9	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	25
Croup	2	2	.....	2	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5
Scarlet Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Typhoid Fever	2	1	1	2	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	4
Small-pox	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Typhus Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Measles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	17
Whooping Cough	4	3	1	4	.....	.....	3	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diarrhoeal Diseases	5	4	1	5	.....	.....	4	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4
Phthisis	34	12	22	15	16	3	1	.....	.....	6	10	9	3	3	2	.....	.....	.....	35
Other Tubercular Diseases	6	3	3	3	1	2	1	.....	.....	.....	2	1	.....	2	.....	.....	.....	.....	7

Malarial Fevers	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nervous System	32	21	11	17	12	3	11	4	.....	2	1	1	2	2	5	3	1	.....	46
Heart Diseases	21	10	11	1	16	4	.....	.....	.....	1	2	1	4	4	2	6	1	.....	18
Bronchitis	22	9	13	16	2	4	12	2	1	.....	1	.....	1	.....	1	3	1	.....	23
Pneumonia	30	17	13	19	9	2	6	5	2	2	4	1	4	1	2	2	1	.....	46
Other Diseases of the Respiratory Organs.	17	10	7	15	2	.....	8	6	.....	.....	1	.....	.....	1	1	.....	.....	.....	9
Diseases of Digestive System	26	17	9	9	13	4	6	.....	.....	1	2	4	3	5	2	3	.....	.....	23
Urinary System	15	8	7	2	10	3	.....	1	.....	.....	2	1	2	3	.....	4	2	.....	13
* Congenital Debility	8	4	4	8	.....	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	21
Old Age	14	5	9	.....	3	11	.....	.....	.....	.....	.....	.....	.....	.....	2	4	5	3	6
Suicides	5	4	1	.....	4	1	.....	.....	.....	.....	.....	2	.....	2	1	.....	.....	.....	4
Other violent deaths	15	11	4	5	9	1	1	1	2	.....	.....	2	5	2	.....	.....	2	.....	10
All other causes	33	15	18	9	21	3	2	.....	1	1	5	2	8	4	7	2	1	.....	29

* Including Premature Births, Atrophy, Inanition, Infantile Debility, Marasmus, Atelectasis and Preternatural Births.

TABLE No. 14.

Showing by Wards the Estimated Population, Total Deaths, Annual Death Rate, and Number of Deaths from some of the Principal Causes for the year 1897.

WARDS.	Estimated Population.	Total Deaths.	Annual Death Rate per 1,000 Population.	CAUSE OF DEATH.					
				Diphtheria including Membranous Croup.	Scarlet Fever.	Measles.	Typhoid Fever.	Diarrhœal Diseases.	Tubercular Diseases.
First	10,484	87	8.29	1	....	1	....	4	15
Second	10,869	122	11.22	2	1	....	....	4	12
Third	5,272	85	16.12	5	....	....	....	5	11
Fourth	10,781	117	10.85	1	....	....	1	2	20
Fifth	10,621	141	13.28	6	....	5	....	11	16
Sixth	14,847	160	10.77	4	....	1	2	6	24
Seventh	7,267	90	12.38	.....	....	....	1	4	12
Eighth	17,229	182	10.56	4	....	3	2	6	33
Ninth	18,679	204	10.92	9	....	1	2	19	30
Tenth	17,707	221	12.48	8	....	1	....	14	32
Eleventh	20,566	302	14.68	20	....	2	....	23	29
Twelfth	12,712	128	10.07	.....	....	1	2	12	17
Thirteenth	16,876	190	11.26	8	....	1	2	14	22
Fourteenth	18,913	266	14.06	5	....	1	3	38	17
Fifteenth	15,161	113	7.45	4	....	....	1	9	15
Sixteenth	8,528	95	11.14	6	....	....	2	.....	10
Seventeenth	9,795	126	12.86	6	....	1	....	2	18
Eighteenth	12,269	167	13.61	8	....	8	1	12	21
Nineteenth	14,819	187	12.62	22	....	4	4	10	17
Twentieth	14,338	192	13.39	11	2	4	....	12	23
Twenty-first	10,267	97	9.44	8	....	2	1	6	15
Hospitals and Institutions	.....	334	.....	.....	....	....	7	31	39
Total	275,000	3,606	13.11	138	3	36	31	244	448

TABLE No. 15.

Showing the Number of Cases and Deaths, by Wards, from Diphtheria, Scarlet Fever, Measles and Typhoid Fever, for the year 1897.

WARDS.	Diphtheria.		Scarlet Fever.		Measles.		Typhoid Fever.		Total Contagious Diseases.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
First	15	1	1	.....	24	1	4	.....	44	2
Second	14	2	3	1	1	.....	2	.....	20	3
Third	13	5	2	.....	8	.....	.....	.....	23	5
Fourth	16	1	3	.....	4	.....	5	1	28	2
Fifth	19	6	5	.....	13	5	3	.....	40	11
Sixth	22	4	5	.....	10	1	4	2	41	7
Seventh	7	.....	.....	.....	26	.....	2	1	35	1
Eighth	28	4	13	.....	25	3	11	2	77	9
Ninth	57	9	7	.....	5	1	5	2	74	12
Tenth	63	8	3	.....	7	1	4	.....	77	9
Eleventh	32	20	4	.....	7	2	12	.....	55	22
Twelfth	12	.....	2	.....	3	1	4	2	21	3
Thirteenth	44	8	2	.....	8	1	4	2	58	11
Fourteenth	34	5	6	.....	8	1	11	3	59	9
Fifteenth	40	4	3	.....	13	.....	2	1	58	5
Sixteenth	33	6	8	.....	46	.....	3	2	90	8
Seventeenth	23	6	6	.....	11	1	2	.....	42	7
Eighteenth	31	8	3	.....	36	8	10	1	80	17
Nineteenth	136	22	1	.....	14	4	9	4	160	30
Twentieth	52	11	6	2	18	4	3	.....	79	17
Twenty-first	17	8	6	.....	2	2	9	1	34	11
Hospital and Institutions	.....	.....	.....	.....	.....	.....	.....	7	.....	7
Total	708	138	89	3	289	36	109	31	1195	208

TABLE No. 16.

Showing by Months the Number of Male and Female Deaths, and the Annual Death Rate per 1,000 population for each Sex.

MONTHS.	Number of Deaths.			Death rate per 1,000 of Estimated Population.		
	Male.	Female.	Total.	Male.	Female.	Total.
January	193	175	368	8.42	7.64	16.06
February	165	174	339	7.20	7.59	14.79
March	187	148	335	8.16	6.46	14.62
April	174	115	289	7.59	5.02	12.61
May	155	135	290	6.76	5.89	12.65
June	122	123	245	5.32	5.37	10.69
July	137	136	273	5.98	5.93	11.91
August	187	155	342	8.16	6.76	14.92
September	161	139	300	7.02	6.07	13.09
October	132	115	247	5.76	5.02	10.78
November	131	143	274	5.71	6.20	11.95
December	163	141	304	7.11	6.15	13.26
Total	1907	1699	3606	6.93	6.18	13.11

TABLE No. 17.

Showing the Nativity of those dying in the City of Milwaukee during the year 1897.

NATIVITY OF DECEASED.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Milwaukee	209	168	164	139	141	125	127	215	172	139	125	134	1,858
Wisconsin other than Milwaukee	12	18	18	14	13	10	16	10	15	8	10	14	158
Other of United States	26	32	22	23	17	16	15	15	18	11	24	18	237
Canada	3	1	1	.....	.....	1	3	.....	1	1	1	2	14
Great Britain and Ireland	15	24	15	12	16	17	9	9	8	11	12	25	173
* Germany	82	86	91	75	90	59	78	72	59	53	80	79	904
Poland	11	6	11	13	8	3	9	4	5	10	12	11	103
Other European Countries	9	4	6	12	4	10	11	8	13	9	8	20	114
Unknown or not stated	1	.....	7	1	1	4	5	9	9	5	2	1	45
Total	368	339	335	289	290	245	273	342	300	247	274	304	3,606

* As many physicians in making death reports specify Germany only, where German Poland is intended, it is evident that a considerably larger number should under this classification be credited to Poland, and a like number taken from those credited to Germany.

TABLE No. 18.

Showing the Place of Interment of bodies dying in the city and of those brought to the city for burial during the year 1897.

CEMETERIES.	Computed Deaths.	Still Births.	Bodies brought to City for Burial.	Total Interments.
Union	926	143	118	1,187
Forest Home	550	55	151	756
Calvary	897	104	46	1,047
Polish Union	412	73	7	492
Pilgrim's Rest	256	45	11	312
Wanderer's Rest	80	24	5	109
Trinity	118	13	4	135
Greenwood	8	.....	3	11
Spring Hill	19	.....	5	24
Second Home	26	4	3	33
County Cemetery	39	16	5	60
Cemeteries other than above	269	10	44	323
For Anatomical Purposes	6	4	.....	10
Total	3,606	491	402	4,499

TABLE No. 19.

Showing for the years 1880 to 1897 inclusive, the Total Deaths, and also the Number of Deaths from fifteen of the Principal Causes of Death during that period.

Cause of Death.	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897
Total deaths	2390	2697	2729	2532	2768	2796	3021	3257	3426	3188	3747	4689	4516	4462	4253	3885	3904	3606
Apoplexy	23	27	37	43	65	83	69	62	67	45	63	64	93	93	90	89	108	92
Bronchitis	37	59	76	68	54	40	72	54	98	90	105	215	179	186	169	181	189	193
Cholera Infantum	95	113	145	91	217	99	153	221	151	127	121	205	213	262	187	168	97	118
Consumption	138	203	207	199	220	238	246	281	289	284	294	318	314	262	354	288	335	346
Convulsions	220	312	316	270	282	297	286	289	361	293	338	334	272	328	218	239	246	191
Croup	47	44	50	67	54	98	116	83	71	74	59	54	84	64	72	67	56	32
Diphtheria	118	114	84	109	80	120	126	71	69	135	241	400	400	209	175	112	198	106
Enteritis	62	126	95	120	121	113	130	107	117	112	109	133	109	204	149	164	147	149
Measles	11	19	20	3	17	35	19	12	24	2	34	38	21	42	69	1	29	36
Old Age	50	53	93	84	72	85	99	100	109	114	130	172	159	148	124	116	108	123
Pneumonia	79	128	192	114	115	128	151	162	196	155	297	386	283	273	245	271	237	239
Scarlet Fever	101	142	55	93	63	32	22	27	56	72	37	86	76	94	12	5	4	3
Small Pox	....	2	10	.....	.....	.....	.....	....	.....	.....	.....	....	....	.....	244	30	.....	.....
Typhoid Fever	10	40	35	34	49	40	49	43	63	48	73	77	76	95	70	63	46	31
Whooping Cough	6	2	22	16	24	7	13	46	13	21	8	76	33	12	69	61	15	19

BIRTHS.

TABLE No. 20.

Showing by months the Total Number Reported, their Color, Sex, and by Whom Reported.

MONTHS.	Color.		Sex.		By Whom Reported.			Total.
	White.	Black.	Male.	Female.	Physician.	Midwife.	Parents.	
January	573	.....	306	267	112	461	.....	573
February	589	1	300	290	87	502	1	590
March	641	.....	342	299	118	521	2	641
April	663	2	359	306	123	540	2	665
May	593	.....	304	289	135	456	2	593
June	619	1	312	308	134	483	3	620
July	664	1	341	324	111	553	1	665
August	701	1	374	328	160	542	.....	702
September	695	1	338	358	146	550	.....	696
October	670	1	336	335	204	467	.....	671
November	618	1	312	307	126	491	2	619
December	606	1	303	304	147	460	.....	607
Total	7632	10	3927	3715	1603	6026	13	7642

TABLE No. 21.

Showing by wards the Number of Births and the Annual Birth Rate per 1,000 during the year 1897.

WARDS.	Estimated Population.	Births Reported.	Annual Birth Rate per 1,000 Population.
First	10,484	125	11.92
Second	10,869	219	20.15
Third	5,272	137	25.99
Fourth	10,781	90	8.35
Fifth	10,621	138	12.99
Sixth	14,847	354	23.84
Seventh	7,267	44	6.05
Eighth	17,229	324	18.80
Ninth	18,679	562	30.09
Tenth	17,707	467	26.37
Eleventh	20,566	695	33.79
Twelfth	12,712	380	29.89
Thirteenth	16,876	491	28.97
Fourteenth	18,913	888	46.95
Fifteenth	15,161	243	16.02
Sixteenth	8,528	67	7 85
Seventeenth	9,795	226	23.07
Eighteenth	12,269	310	25.26
Nineteenth	14,819	535	36.10
Twentieth	14,338	487	33.96
Twenty-first	10,267	345	33.60
Ward not specified	.....	515	.....
Total	275,000	7,642	27.79

TABLE No. 22.

Showing by Months the Nativity of Parents of Children whose Births were reported during the year 1897.

NATIVITY OF PARENT.	FATHERS.													MOTHERS.												
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Tot'l.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Tot'l.
Milwaukee	89	79	87	90	96	79	79	97	94	99	65	93	1047	96	107	109	105	124	122	120	118	109	126	94	112	1342
Wisconsin outside of Milwaukee	40	37	48	46	50	45	42	58	51	65	53	46	581	50	46	66	66	64	49	48	83	68	71	60	46	717
Other parts of United States	48	72	61	74	59	59	56	74	61	79	59	71	773	60	69	65	95	65	74	60	72	74	93	79	71	877
Germany	275	271	319	318	262	350	345	354	369	321	311	294	3789	276	263	294	291	225	297	308	326	333	281	276	294	3464
Other European Countries	103	125	115	125	117	82	139	116	108	103	121	99	1353	82	104	104	105	107	75	128	98	105	96	109	99	1213
Unknown, or not stated	18	6	11	12	9	5	4	3	13	4	10	4	99	9	1	3	3	8	3	1	4	7	4	1	4	48
Total	573	590	641	665	593	620	665	602	696	671	619	607	7642	573	590	641	665	593	620	665	702	696	671	619	607	7642

TABLE No. 23.

Showing by Months the Total Births reported, the Birth Rate per 1,000, the Number of Males and Females, together with the Percentage to Total Births of each Sex.

MONTHS.	Number of Births Registered.	Birth rate per 1,000.	Males.	Females.	Per centage of Males to total.	Per centage of Females to total.
January	573	25.00	306	267	53.40	46.60
February	590	25.74	300	290	50.84	49.16
March	641	27.97	342	299	53.35	46.65
April	665	29.02	359	306	53.98	46.02
May	593	25.87	304	289	51.26	48.74
June	620	27.05	312	308	50.32	49.68
July	665	29.02	341	324	51.28	48.72
August	702	30.63	374	328	53.27	46.73
September	696	30.36	338	358	48.88	51.12
October	671	29.28	336	335	50.08	49.92
November	619	27.01	312	307	50.40	49.60
December	607	26.50	303	304	49.91	50.09
Total	7642	27.79	3927	3715	51.38	48.62

REPORT OF SECRETARY.

Walter Kempster, M. D., Commissioner of Health:

DEAR SIR—The following is a list of the receipts and expenditures of the Health Department from January 1, 1897, to December 31, 1897:

RECEIPTS.

Balance on hand January 1, 1897	$8,139 86	
Appropriation	100,000 00	
Cash receipts	69 25	
Abating nuisance	5 75	
		$108,214 86

EXPENDITURES.

For collecting and disposing garbage	$69,897 16	
Salaries	28,928 33	
For sundries and disbursement	7,521 64	
Total cost of Health Department for year 1897		106,347 13
Balance December 31, 1897		$1,867 73

The following is an itemized statement of expenditures:

1896.			
Dec.	21.	December pay roll	$2,211 84
1897.			
Jan.	4.	C. Baumbach, sulphur	10 64
		Des Forges & Co., book on analysis of water	5 50
		Doelger & Kirsten, hose	2 00
		W. Frankfurth Co., hardware	1 70
		Goodyear Rubber Co., hose	1 08
		H. Mooers Co., repairs	50 00
		C. A. Rhode Co., book on Blyth Food	7 50
		Wis. Lakes Ice & Cartage Co., ice	5 00
		I. Ladoff, services, December	66 66
	18.	W. A. Diedrichsen, stamps	10 00
		Ed. Keogh, printing	91 03
		Ed. Keogh, printing	62 91
		H. G. Razall Mfg. Co., books	26 72

Jan.	18.	F. Reiske, milk	9 25
		C. Rostad & Co., groceries	37 83
		Spiegel & Co., vaccine, etc	45 58
		Wis. Rendering Co., removing garbage	6,333 33
		S. H. Meadows, drugs	31 57
		S. H. Meadows, drugs	32 05
	23.	A. Krause, goods destroyed by disinfection	17 15
Feb.	1.	January pay roll	2,210 66
		W. A. Diedrichsen, 2,000 postals to notify schools	20 00
		Geo. Landers, removing night soil	20 00
		Library Bureau, card system of indexing	376 20
		Pasteur Vaccine Co., anti-toxine	35 10
		Shorse & Co., post-mortem outfit	53 24
		J. C. Wehrman, nursing, Dec. 4 to Jan. 29. 1897	200 00
		Nellie Wells, nursing, Dec. 18 to Jan. 24, 1897	125 00
		I. Ladoff, services, January	66 66
	15.	C. Baumbach Co., supplies	7 73
		W. A. Diederichsen, postage stamps	15 00
		W. Frankfurth Co., stove repairs	1 50
		Ed. Keogh, printing	71 73
		S. H. Meadows, drugs	36 92
		H. Nimmer, meat for hospital	3 40
		H. Nimmer, meat for hospital	3 10
		H. Nimmer, meat for hospital	2 88
		H. Nimmer, meat for hospital	3 15
		H. Nimmer, meat for hospital	4 54
		H. Nimmer, meat for hospital	7 83
		H. Nimmer, meat for hospital	9 08
		W. Peterman & Son, hardware	1 62
		F. Reiske, milk	13 80
		C. Rostad & Co., groceries	52 83
		John Schroeder, lumber	17 13
		Spiegel & Co., anti-toxine	11 18
		H. H. Kemper, team hire for ambulance	4 00
		Wis. Rendering Co., collecting and disposing garbage	6,333 33
Mch.	1.	S. Barrend, nursing	14 00
		Charles Baumbach Co., oil, etc	7 62
		Devos & Whitnall, coal	20 86
		Devos & Whitnall, coal	71 52
		Devos & Whitnall, coal	71 52
		Devos & Whitnall, coal	71 52
		I. Ladoff, services	66 66
		Pasteur Vaccine Co., antitoxine	54 00
		H. G. Razall Mfg. Co., books	1 75
		O. A. Thiele, supplies	17 90

Mch.	1.	J. C. Wehrman, nursing	25 00
		A. Werner, apparatus	11 75
		Wis. Lakes Ice & Cartage Co., ice	5 00
		February pay roll	2,196 55
	15.	W. Frankfurth, pans	31
		S. H. Meadows, drugs	22 71
		F. Reiske, milk	16 55
		C. Rostad, groceries	42 53
		Spiegel & Co., vaccine	4 20
		Wis. Rendering Co., collecting and disposing garbage	6,333 33
		Wis. Telephone Co., services	50 00
	29.	Adamant Mfg. Co., wall finish	14 00
		Berry Bros., varnish	84 00
		Hahn & Co., lime	55
		Ed. Keogh, printing	26 69
		Ed. Keogh, printing	31 10
		W. Meyer & Son, team hire	35 00
		Mil. Gas Light Co., gas	40
		Nellie Wells, nurse	150 00
		Rohde & Patek Bros., white lead and oil	32 28
		W. Diederichsen, postage stamps	10 00
		I. Ladoff, services	66 66
Apr.	1.	March pay roll	2,457 42
	2.	Adamant Mfg. Co., wall finish	6 88
		Baush & Lomb Co., optical goods	174 39
		Devos & Whitnall, coal	95 36
		W. H. Halsey, plumbing	53 40
		Hecht & Zummach, supplies	29 19
		Wis. Lakes Ice & Cartage Co., ice, Isolation Hospital for 1896	24 00
		W. A. Diederichsen, stamps for monthly report	15 00
	26.	I. Ladoff, services	66 66
		Marschalk & Weiss, building paper	70
		S. H. Meadows, drugs, etc	19 88
		H. Meyer & Son, team hire	5 00
		H. G. Razall Mfg. Co., books	6 75
		F. Reiske, milk	11 00
		G. E. Seaman, medical services	5 00
		Spiegel & Co., antitoxine	14 56
		J. B. Whitnall, lime	55
		Wis. Lakes Ice & Cartage Co., ice	5 00
		Wis. Rendering Co., collecting and disposing garbage	6,333 33
May	1.	April pay roll	2,294 64
	10.	C. Baumbach, oil and sulphur	7 85
		W. J. Fiebrantz, 1,000 2-cent stamped envelopes	21 80

May	10.	Hecht & Zummach, sponges	2 17
		Richards & Co., supplies	114 44
	17.	H. Mooers Co., repairing heating apparatus	99 78
	24.	A. Beyer, supplies	3 00
		W. A. Diederichsen, due bill for stamps	20 00
		B. Hoffman Mfg. Co., valves, etc	2 22
		E. N. Katz, supplies	7 18
		I. Ladoff, services	66 66
		W. Meyer & Son, wagon hire	6 00
		H. G. Razall Mfg. Co., books	8 25
		F. Reiske, milk	4 60
		C. Rostad & Co., groceries	21 05
		Spiegel & Co., antitoxine	1 68
		Wis. Telephone Co., services	50 00
		Wis. Rendering Co., collecting and disposing garbage	6,333 33
		W. Wood & Co., books	46 25
June	1.	May pay roll	2,207 83
	7.	Adams Stamp & Stencil Co., rubber stamps	1 50
		Chas. Baumbach Co., copperas	2 00
		E. Dorrestan & Son, supplies	7 75
		Ed. Keogh, printing	4 15
		Ed. Keogh, printing	105 28
		S. H. Meadows, chemicals	37 51
		W. Meyer & Son, team hire	14 00
		H. Nimmer, meat for hospital	43 57
		J. Rohrscheib, cleaning up night soil	3 50
	21.	Hecht & Zummach, brushes	1 16
		Ed. Keogh, printing	28 91
		Library Bureau, index cards	47 25
		R. L. Polk & Co., medical register	6 00
		Schwaab Stamp & Seal Co., 20 stars	20 00
		W. J. Fiebrantz, stamps	10 00
		Pasteur Vaccine Co., antitoxine	31 50
		F. Reiske, milk	9 55
		C. Rostad & Co., groceries	27 72
		I. Ladoff, services	66 66
July	1.	June pay roll	2,214 68
	6.	R. Hyde Co., antitoxine syringe	3 00
		F. Reiske, milk	6 00
		Miss J. C. Wehrman, nurse	38 52
		Wis. Rendering Co., collecting and disposing garbage	6,333 33
	19.	American Fine Art Co., letter heads	27 50
		Des Forges & Co., stationery	18 00
		W. A. Diederichsen, stamps for circulars and reports	14 00
		Fries Bros., disinfectant	110 00

July 19.	Ed. Keogh, printing	52 36
	Johnson Electric Con. Co., pipe, etc	3 02
	I. Ladoff, services	66 66
	C. Rostad, groceries	9 09
	Rundle-Spence Mfg. Co., fittings	4 77
	Wm. Steinmeyer Co., groceries	20 02
	J. B. Whitnall Co., cement	1 55
	Wis. Lakes Ice & Cartage Co., ice	5 00
	Wis. Rendering Co., collecting and disposing garbage	6,333 33
	A. G. Wright, directory	5 00
	Adamant Mfg. Co., plastering	100 00
23.	C. Rostad & Co., supplies	25 54
Aug. 2.	July pay roll	2,241 05
	Ed. Keogh, printing	22 90
	Ed. Keogh, printing	11 19
	C. Abresch Co., wagon repairs	25 00
	Biersach & Niedermeyer, smoke tester	4 00
	G. Burroughs & Son, milk case	5 50
	Devos & Whitnall, coal	23 88
	Parke, Davis & Co., antitoxine	39 02
	Richards & Co., supplies	12 70
	Stark Bros., window shades	2 59
16.	C. Baumbach Co., sulphur	3 07
	Devos & Whitnall, wood	6 00
	W. J. Fiebrantz, stamps	10 00
	S. H. Meadows, chemicals	30 89
	Elenora Mueller, services	10 64
	F. Reiske, milk	4 70
	John Schroeder, lumber	30 36
	John Schroeder, lumber	5 15
	A. Spiegel & Co., antitoxine	76 55
	W. Steinmeyer Co., groceries	10 82
30.	Devos & Whitnall, coal	17 88
	Ed. Keogh, printing	18 87
	Rohn & Meyers, supplies	13 10
	John Schroeder, lumber	2 97
	I. Ladoff, services	66 66
Sept. 1.	August pay roll	2,131 99
7.	A. Michalski, goods destroyed by disinfecting	13 77
	W. H. Thole, goods destroyed by disinfecting	39 25
	Herman Irmen, painting, etc	49 44
28.	City Stove & Range Rep. Co., repairs	12 00
	W. A. Diederichsen, stamps	10 00
	T. W. Heinig, ventilators	24 15
	I. Ladoff, services	66 66

Sept.	28.	S. H. Meadows, chemicals	46 75
		F. Reiske, milk	4 90
		C. Rostad, groceries	10 23
		Wis. Telephone Co., services	53 40
		Ed. Keogh, printing	202 67
		W. A. Diederichsen, stamps for annual report	20 00
Oct.	1.	September pay roll	2,169 89
		Wis. Rendering Co., collecting and disposing garbage	6,333 33
	11.	Adams Stamp & Stencil Co., rubber stamps	50
		C. Abresch, wagon	304 50
		Badger Typewriter & Supply Co., supplies	7 00
		City Stove Repair Co., stove repairs	29 10
		Doelger & Kirsten, repairing sprinkler	29 12
		Doelger & Kirsten, repairing sprinkler	9 45
		C. L. Kiewert & Co., bungs	1 50
		I. Ladoff	66 66
		Lauersdorf & Swendson, garbage box	21 00
		S. H. Meadows, water still	31 50
		S. H. Meadows, chemicals	30 56
		C. Rostad & Co., groceries	8 24
		F. Reiske, milk	8 70
		Standard Oil Co., barrels	431 00
		Stolper Cooperage Co., covers	233 00
		W. Van Eweyk, signs	7 70
		Wis. Lakes Ice & Cartage Co., ice	5 00
	15.	C. W. Milbrath, pay roll for collecting and disposing garbage	4,407 27
	25.	W. A. Diederichsen, postage stamps	5 00
		A. Bastain, repairs	1 25
		S. Chapman, map	50
		Gimbel Bros., gowns, etc	9 96
		C. Rostad, groceries	10 95
		W. Steinmeyer Co., groceries	19 14
Nov.	1.	October pay roll	2,108 68
	8.	Adams Stamp & Seal Co., repairs	1 00
		J. Q. Adams, stamp	2 50
		S. H. Meadows, chemicals	18 26
		W. Meyer & Son, team hire	24 00
		F. Reiske, milk	7 55
		C. Rostad, groceries	9 28
		W. Steinmeyer, groceries	11 81
		A. Spiegel & Co., antitoxine	81 75
		Wykoff, Seaman & Benedict, repairs	75
		H. H. West Co., books	4 00
		Devos & Whitnall, coal	17 88

Nov.	8.	Devos & Whitnall, coal	17 88
	13.	C. W. Milbrath, pay roll for collecting and disposing of garbage	4,800 19
	22.	C., M. & St. P. R. R. Co., railroad crossing at Keefe Ave.	26 33
		Devos & Whitnall, coal	23 25
		Wm. J. Fiebrantz, postage stamps	10 00
		Pasteur Vaccine Co., antitoxine	27 00
		Richards & Co., supplies	28 20
		W. Steinmeyer Co., groceries	23 78
Dec.	1.	November pay roll	2,241 55
	6.	Charles Baumbach, supplies	7 79
		Charles Baumbach, oils	5 04
		Library Bureau, cards	4 35
		S. H. Meadows, chemicals	34 63
		F. Reiske, milk	6 35
		A. Spiegel & Co., antitoxine	98 47
	13.	C. W. Milbrath, pay roll for collecting and disposing of garbage	4,949 83
	20.	Cornish, Curtis & Greene, milk tester	28 50
		Devos & Whitnall, coal	77 63
		Ed. Keogh, printing	8 50
		W. A. Diedrichsen, 500 2-cent stamped envelopes	10 90
		W. J. Fiebrantz, postage stamps	10 00
		I. Ladoff, services, 1896, August and September	104 40
		H. Nimmer, meat for hospital	65 47
		C. Rostad & Co., groceries	3 70
		W. Steinmeyer Co., groceries	24 10
		Wis. Telephone Co., service	59 83
		Ed. Keogh, printing	9 00
		H. H. West Co., books	52 02
	21.	December pay roll	2,241 55
1898.			
Jan.	1.	H. Irmer, repairs	43 38
	8.	C. W. Milbrath, pay roll for collecting and disposing of garbage	3,987 30
		J. Dorsch & Son, plows and repairs	57 40
		Hoffman & Billings Mfg. Co., repairing disinfector	2 75
		R. Hyde Co., syringe	3 75
		H. H. West Co., record book	14 50
	17.	C. Baumbach Co., sulphur	3 15
		E. T. Doyn, plumbing	52 18
		J. Dorsch & Son, share	3 50
		S. H. Meadows, chemicals	14 23
		Phil. Reading Coal Co., coal	15 63
		R. L. Polk & Co., directory	4 00

Jan. 17.	W. Steinmeyer Co., groceries	23 26
	Spiegel & Co., antitoxine	27 25
	F. Reiske, milk	6 40
	Bausch & Lomb Opt. Co., microscope	194 38
	Ed. Keogh, printing	24 53
		$106,347 13

Respectfully,

ALBERT E. KUOLT,
Secretary

REPORT OF CHIEF OF SANITARY INSPECTORS.

Walter Kempster, M. D., Commissioner of Health:

DEAR SIR—Herewith permit me to submit for your annual report the following statement of the work of the Sanitary Inspectors' Department for the year ending 1897.

The report and accompanying tables give a detailed statement of nuisances found, and the orders issued for their abatement.

The method of having Sanitary Inspectors attend the funerals of those who have died of diphtheria and scarlet fever, or other dangerous contagious diseases, and disinfection of premises as outlined in former reports, have still been continued.

The house-to-house and block-to-block inspection, which has been a feature of the summer work, has been only partially accomplished the past year. The inspectors make daily visits to all houses in which diphtheria exists and see that the wants of families under quarantine are attended to; also see to the complaints of citizens about defective plumbing, stables and manure, vaults, cellars, pools of stagnant water on lots, etc. Many of these sanitary transgressors can only be forced to comply with the orders issued by this department by the tedious process of law, requiring the loss of much time in court by the inspectors.

There has been 144 prosecutions brought before the Police Court during the year; 66 were dismissed on payment of costs, and 9 had sentence suspended and were discharged.

All public and parochial schools have been inspected by the Sanitary Inspectors once a week during school session.

ICE.

Very little difficulty has been experienced the past year in procuring a supply of first-class ice, such as is necessary for domestic use. The same regulations for the cutting and storing of ice as were in force last year were again put in operation, and worked satisfactorily.

The total amount of ice stored in ice houses located within the limits of the city was 105,700 tons.

The Sanitary Inspectors inspected the work of the crew of the steam barge Rand engaged in transporting garbage and animal matter from the city of Milwaukee to the plant of the Wisconsin Rendering Company at Mequon until the 25th of August, when the contract for removing garbage and animal matter by boat expired.

Five horses afflicted with glanders, two cows afflicted with tuberculosis were killed, their carcasses disposed of and the stables cleaned and disinfected under the supervision of the department.

One thousand four hundred and thirty-seven orders of a general nature, comprising all classes of nuisances other than water closets, cleaning of vaults and construction of sewers and connection with street sewers, have been issued. Of this number, 133 remain on the books, and orders will be duplicated as soon as the season advances; while 1,304, or 19 per cent., have been complied with.

The following tables show the number and nature of the orders issued during the year commencing January 1 and ending December 31, 1897:

GENERAL AND SEWER ORDERS.

WARDS.	General Orders.			Sewer Orders.		
	Obeyed.	Dis-obeyed.	No. Issued.	Obeyed.	Dis-obeyed.	No. Issued.
First	84	8	92	.....	1	1
Second	62	9	71	1	1	2
Third	68	9	77	1	1	2
Fourth	200	28	228	2	10	12
Fifth	90	14	104	1	.....	1
Sixth	50	12	62	7	2	9
Seventh	85	7	92	.....	1	1
Eighth	55	9	64	1	2	3
Ninth	76	9	85	6	3	9
Tenth	65	13	78	3	4	7
Eleventh	48	6	54	7	6	15
Twelfth	35	10	45	3	1	4
Thirteenth	41	6	47	3	2	5
Fourteenth	32	4	36	25	9	34
Fifteenth	79	2	81	1	4	5
Sixteenth	46	6	52	.....	1	1
Seventeenth	18	.....	18	9	13	22
Eighteenth	73	9	82	7	2	9
Nineteenth	50	6	56	9	11	20
Twentieth	48	8	56	21	6	27
Twenty-first	31	8	39	2	5	7
Totals	1336	183	1519	109	85	196
	88%	12%		56.2%	43.3%	

Seven orders were duplicated.

TABLE No. 25.

ORDERS TO PROVIDE WATER CLOSETS AND CLEAN VAULTS.

WARDS.	VAULTS.			WATER CLOSETS.		
	Obeyed.	Dis-obeyed.	No. Issued.	Obeyed.	Dis-obeyed.	No. Issued.
First	28	3	31	2	5	7
Second	36	4	40	3	1	4
Third	26	2	28	4	5	9
Fourth	81	11	92	13	11	24
Fifth	49	6	55	2	5	7
Sixth	56	3	59	2	1	3
Seventh	18	3	21	5	3	8
Eighth	69	1	70	2	3	5
Ninth	152	16	168	1	2	3
Tenth	72	1	73	1	.....	1
Eleventh	124	7	131	.....	1	1
Twelfth	107	4	111	1	3	4
Thirteenth	70	3	73	.....	.....	.....
Fourteenth	106	3	109	1	.....	1
Fifteenth	27	3	30	1	.....	1
Sixteenth	15	1	16	.....	1	1
Seventeenth	59	1	60	.....	.....	.....
Eighteenth	64	1	65	3	.....	3
Nineteenth	57	8	65	.....	.....	.....
Twentieth	61	4	65	.....	.....	.....
Twenty-first	52	3	55	.....	.....	.....
Totals	1329	88	1417	41	41	82
	93.8%	6.2%			50%	

Ten vault orders duplicated.

ORDERS PERTAINING TO PLUMBING, ETC.

a.

To make sewer	196
Clean sewer	39
Connect barn to sewer or cask	5
Connect bar sink to sewer	2
Connect ice box to sewer	7
Connect hydrant to sewer	1
Connect roof conductors to sewer	13
Connect sink to sewer	9
Connect barn to sewer	2
Renew sewer	10
Repair sewer	55
Seal sewer	8
Trap sewer	8
Total	350

b.

Clean sink waste pipe	3
Repair sink	5
Repair sink waste pipe	7
Trap sink	25
Trap and ventilate sink	8
Ventilate sink	3
Provide sink	4
Provide ventilation	7
Clean ventilation pipe	2
Repair ventilation pipe	13
Total	77

c.

Connect slop-hopper to sewer	2
Provide slop-hopper	7
Remove slop-hopper	2

Repair slop-hopper	7
Trap slop-hopper	2
Clean slop-hopper	1
Total	21

d.

Clean water closet	31
Provide water closet	82
Provide water for water closet	41
Remove pan closet	10
Remove water closet	1
Repair water closet	45
Repair water pipe	13
Thaw water closet	1
Ventilate water closet	2
Trap water closet	1
Total	225

e.

Provide catch basin	1
Renew plumbing	1
Repair plumbing	67
Repair catch-basi.n	1
Repair waste pipe	2
Repair water pipe	2
Repair trap	1
Total	75

II.—ORDERS PERTAINING TO VAULTS AND URINALS.

a.

Clean vaults	1,427
Disconnect vault from sewer	8
Disinfect vault	59
Fill vault	33
Provide vault, water-tight	101
Remove vault	127
Repair vault	5
Remove vault from line of lot	9
Total	1,769

b.

Clean urinal	3
Connect urinal	6
Provide urinal	3
Remove urinal	2
Repair urinal	2
Ventilate urinal	1
Total	17

III.—ORDERS PERTAINING TO MANURE AND GARBAGE NUISANCES.

a.

Provide manure box	57
Provide cover for manure box	2
Repair manure box	5
Remove manure	93
Remove manure box	2
Total	159

b.

Provide box for garbage	165
Remove garbage box	4
Remove mixed garbage	32
Provide cover for garbage box	3
Renew garbage box	1
Total	205

IV.—MISCELLANEOUS ORDERS.

Boil water before using	2
Clean alley	9
Clean basement, cellar and premises	26
Clean well	3
Clean and fill cistern	29
Clean pen for poultry	6
Clean shed	3
Clean cows	24
Close well	46
Clean yard	24
Cover cistern	6
Fill or drain basement or cellar	11
Enclose vault	2
Fill or drain lot and sink hole	15
Provide box for ashes	12
Provide eave gutters for barn and house	15
Provide new floors	11
Provide water	5
Provide cisterns	1
Referred to Board of Public Works	51
Remove dogs	2
Remove chickens and ducks	20
Remove chicken coop	2
Remove horse from basement and shed	5
Remove filth from basement	4
Remove hogs	1
Remove night soil from yard	4
Remove rubbish and ashes	65
Remove wooden sewer	10
Remove rags	6
Repair smokestack	6
Repair eave gutters and roof conductors	5
Repair roof	1
Clean bakery	22
Clean bedding	1
Disinfect scavenger wagon	1
Ventilate morgue	1
Clean cistern	2

Clean chute	2
Clean stable	6
Clean dry well	2
Provide tank	6
Remove dry well	1
Remove decayed trees	16
Remove pigeons	2
Remove goats	6
Extend chimney	3
Extend exhaust pipe	2
Cover well	3
Total	508

V.—ORDERS TO CEASE COMMITTING NUISANCE.

a.

Cease draining slops to alley	9
Cease draining slops to lot	7
Cease running liquid manure to alley	1
Cease running liquid manure to street gutter	1
Cease running slops to street gutter	3
Cease throwing garbage in alley	1
Cease throwing slops and rubbish into alley	5
Total	27

b.

Cease burning rags	2
Cease throwing night soil in yard	6
Cease throwing slops in yard	12
Cease cooking asphalt	1
Cease tanning hides	2
Cease transporting milk in open wagon	4
Cease slaughtering beef cattle	12
Total	39

The following is a report of the work done pertaining to milk stables inspection during the year:

Number of stables inspected	126
Number of stables in bad condition	17
Number of cows inspected	736
Number of cows kept in good condition	421
Number of cows kept in filthy condition	315
Number of cows fed on hay, mill feed and brewery grain	253
Number of cows fed on hay, mill feed and distillery slops	483
Number of cows that get no exercise during the year	98
Number of cows that get exercise during the summer months	638
Number of stables that have no ventilation shaft for stables	48

All stables referred to are located within the city limits.

During the year the city scavengers cleansed 4,909 vaults, at a cost to the owners of $34,908, which was an average of $3.00 per cubic yard. The price per cubic yard fixed by ordinance is $4.00, but the competition among scavengers reduced the price to $3.00. There are in the city 33 licensed scavengers, employing 40 teams.

Of the vaults cleansed, 1,427 had been previously inspected because they had been reported as nuisances, and orders were issued to the owners to have the nuisances abated.

The value of close inspection of meat and fruit is shown by the following table, wherein it will be seen that the number of confiscations have been very materially reduced:

YEAR.	Meat and Fish.			Fruit and Vegetables.		
	No. of Confiscations.	Weight.	Value.	No.	Weight.	Value.
1893	343	43,904	$3,920 09	128	80,165	$2,266 00
1894	339	55,366	4,699 50	191	10,822	2,342 85
1895	146	22,367	1,248 11	72	58,355	880 15
1896	110	20,331	642 77	40	51,046	440 94
1897	59	7,516	307 93	11	13,530	52 93

The fact that a close watch is kept upon the market and upon peddlers prevents the shipment to the commission merchants of various grades of material which are seized and destroyed wherever found.

The number of Meat and Food Inspectors should be increased, those employed at this time being inadequate to properly inspect all the places which should be watched to prevent illegal transactions in food products.

The ordinance which specifies the area in which large animals shall be butchered, was found upon inspection to be violated, and notice was served upon those who were violating the ordinance to desist butchering large animals upon their premises. One party continuing to violate the ordinance after notification, was arrested and fined.

Among the inspections made during the year a mill was found in the city which tears to pieces old woolen rags for the purpose of making a cheap material to use in bed ticks. No one seemed to know where the rags came from, and there was no effort made to cleanse them before being torn up for the purpose above mentioned.

Citizens from the West Side of the city have made a number of complaints of catch basins that have caused a nuisance to the public by the foul and disgusting odors arising from them. We have called the attention of the Board of Public Works to the foul conditions of these basins several times, and they were flushed with water and cleansed, but this did not prevent the bad odors from arising from the basins, as the main sewers in streets are ventilated in such a way that all sewer gas must escape through catch basins, and unless the Board of Public Works adopts a new plan of ventilating the main sewer the nuisance will continue, and will be dangerous to health, especially for those who live within reach of these foul and disgusting odors.

I would like to call your attention to what I think could be partially remedied, and that is the bad odors in some sections of the city arising from the sewers. Private residences connected with the sewers do not use enough water in flushing their fixtures, and one reason for it is they are afraid of using more than the limited amount of water. If you could induce the Water Department to allow twice the amount of water for domestic purposes which they now allow, it would remove all fear of large water bills, and encourage people to be more lavish in its use, which, in my opinion, would go far toward lessening the bad odors arising from the main sewer, and besides, it would greatly assist in washing out the much complained of branches leading from the sewers, giving a large and stronger volume. I am reliably informed that many families do not use more than half the amount of water allowed for fear of excess in water bills.

Chapter 15, Section 43, an ordinance providing that night soil and other refuse matter shall be conveyed beyond the city limits, has been frequently violated by parties dumping such matter on streets and vacant lots in the outskirts of the city, but as it is done mostly in the dark hours of the night, with our small number of assistants it has been impossible to control and prohibit this infraction of sanitary regulations.

Respectfully submitted,

CHAS. J. FRICKER,
Chief of Sanitary Inspectors.

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BUSINESS REPORT.

MONTHS.	Complaints filed.	Inspector's Reports.	Nuisances Order'd abated.	Vaults Ordered Cleaned.	Scavenger Permits Issued.	Vaults Ordered Removed.	Sewer Connections Ordered.	Cow Stables Inspected.	Citizens Complaints Filed.	Citizens Complaints Verified.	Citizens Complaints not verified.	Sewer Inspections Made.	N'mb'r of Schools Inspected.	Bakeries and Confectionaries Inspected.	Dairymen Licensed.	Visits for Consultation.	Confiscation of Fruits and Vegetables.		Meat Confiscations.	
																	Pounds.	Value.	Pounds.	Value.
January	279	546	185	92	193	11	.....	.....	32	20	12	27	.....	152	23	13	.....	.....	1,897	$65 14
February	205	390	123	35	173	3	.....	123	29	12	17	30	.....	232	27	9	.....	.....	759	31 35
March	187	846	112	25	205	2	.....	115	36	21	15	33	.....	219	19	7	.....	.....	267	14 57
April	286	989	237	50	390	8	74	98	25	13	12	21	.....	259	6	30	4,800	$11 40	1,110	54 65
May	391	929	318	120	597	14	17	85	68	56	12	22	.....	207	764	48	1,500	450	1,217	60 46
June	543	1,269	445	262	700	18	18	84	50	33	17	17	.....	234	166	46	.....	.....	79	4 20
July	746	954	627	304	641	18	33	77	128	73	55	18	85	211	95	66	175	100	803	31 13
August	549	1,129	402	220	641	17	12	81	167	111	56	38	50	198	28	41	.....	.....	170	7 90
September	369	1,150	294	142	462	14	17	73	118	84	34	33	73	140	25	45	7,055	3,603	65	5 10
October	345	1,020	173	90	422	12	13	82	87	69	18	18	68	133	25	81	.....	.....	132	5 15
November	235	877	172	70	333	8	11	49	44	28	16	22	68	210	26	41	.....	.....	245	5 10
December	141	598	61	17	152	2	1	65	30	23	7	29	87	199	20	27	.....	.....	772	23 18
Total	4,276	10,697	3,149	1,427	4,909	127	196	932	814	543	271	308	½ year 431	2,394	1,224	454	13,530	$5,293	7,516	$307 93
During 1896	4,749	10,924	4,223	2,249	5,342	257	247	208	648	365	283	233	none inspected.	none inspected.	1,078	551	51,046	440 94	20,331	642 77
Increase over 1896	.....	.....	.....	.....	.....	.....	.....	724	166	178	.....	75	.....	.....	146	.....	.....	.....	.....	.....
Decrease in 1897	473	227	1,074	822	433	130	51	.....	.....	.....	12	.....	.....	.....	.....	97	37,516	$388 01	12,815	$334 84

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REPORT

OF THE

COMMISSIONER OF HEALTH

OF

MILWAUKEE.

(TWENTY-SECOND ANNUAL REPORT OF THE DEPARTMENT.)

APRIL, 1899.

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OF

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(TWENTY-SECOND ANNUAL REPORT OF THE DEPARTMENT.)

APRIL, 1899.

OFFICERS AND EMPLOYES

OF THE

Health Department of the City of Milwaukee

For the Year Ending April 19, 1899.

Commissioner of Health,

F. M. SCHULZ, PH. G. M. D.

Medical Assistants to Commissioner of Health,

ARTHUR J. PATEK, M. D., LOUIS F. JERMAIN, M. D.,
GILBERT E. SEAMAN, M. D.,
CHARLES J. COFFEY, M. D., JAMES H. HACKETT, M. D.

Food Analyst,

W. C. BENNETT, M. D.

Registrar of Vital Statistics,

JOHN W. COON, M. D.

Secretary,

FRANK B. SCHUTZ.

Clerk,

E. W. DIERCKS.

Registration Clerk,

MISS BELLE REESE.

Stenographer,

MISS N. H. TAYLOR.

Sanitary Police,

T. H. CURTIS, Chief Sanitary Inspector.

DAVID THOMAS, Chief of Disinfecting Corps.

G. E. ADAMS, Garbage Inspector.

F. J. CARNEY, Meat Inspector.

F. FALBE, Meat Inspector.

PHIL STOCK, Meat Inspector.

H. KEIHL.

J. O. OSMUNSON.

J. F. CUNNINGHAM.

E. SEAMAN.

W. FREMONT.

J. HANNAN.

C. F. KRUCKENBERG.

JACOB H. SCHULZ.

P. J. KING.

J. CAMPBELL.

O. E. KLEIN.

JOHN DOLGE.

Matron to City Isolation Hospital for Contagious Diseases,

MISS J. C. WEHRMAN.

Cook to City Isolation Hospital,

SARAH HAISLER.

Janitor to City Isolation Hospital,

MIKE HAISLER.

COMMITTEE ON HEALTH

OF THE

BOARD OF ALDERMEN.

W. H. Graebner.

Arthur A. McCormack.

John Maciolek.

Wm. Schultz.

Val. Jesion.

S. J. Richter.

Geo. E. Hill.

REPORT.

To the Honorable the Mayor and Common Council of the City of Milwaukee:

GENTLEMEN:—

I have the honor to submit herewith for your consideration, the report of the Health Department for the fiscal year ending April 18, 1899, being the Twenty-second Annual Report of this department.

As has been customary in former years, the statistical and financial part of this report is made for the year ending December 31, 1898, the remainder being for the fiscal year ending April 18, 1899.

During the past year Milwaukee has not only upheld its former reputation as to its healthfulness, but has exceeded the expectations of even the most sanguine. With an annual death rate of 11.92 per thousand, or one death to each 88 of the population, Milwaukee can justly feel proud, as this is a record which cannot be equalled by any other city of its size in the United States. In the above, accidental deaths are included, but as these bear no relation to the salubrity of a city, they ought to be eliminated from the general rate, which would give Milwaukee an annual death rate of only 11.25 per thousand.

It is most gratifying to note the gradual improvement in the health of our city within the last few years, as may readily be seen by comparing the annual death rates hereto appended :

Years.	Mortality Rate per 1000.
1891	21.91
1892	20.25
1893	19.23
1894	17.64
1895	15.54
1896	15.00
1897	13.11
1898	11.92

They show a steady and progressive decrease in the mortality rate since 1891. The difference in the death rate between

1891 and 1898, is over 50 per cent, which is undoubtedly a remarkable showing. In 1891 Milwaukee with a population of 214,000 had 4689 deaths; in 1898 with a population of 280,000 (an increase of 66,000) the number of deaths was only 3338. The difference in these figures denotes a better understanding, and more thorough application of the rules of sanitation and hygiene.

During the year 1898 there was recorded in this department 7796 births, of which 4051 were males and 3745 females, an increase over 1897 of 154 births.

The total number of deaths reported during 1898 was 3338, representing an annual death rate of 11.92 per 1000 population. Of this number 1795 were males and 1543 females. The highest mortality rate was in the Third, Fifth, Eleventh and Twelfth Wards. According to previous records some of these same wards show a greater death rate than that of the city as a whole. This is principally due to the large number of deaths among young children and infants in these particular localities.

During the year 1898 the number of deaths of children under one year of age was 1010 as against 1077 for 1897. The deaths of children from one to five years of age numbered 336, the total deaths of children under five years of age numbered 1346 as against 1502 for 1897.

It is a remarkable fact that the number of deaths among children under five years of age has steadily decreased from year to year, notwithstanding a decided increase in the population during the same time. The following figures showing this plainly.

Year.	No. of Deaths.	Ratio to total Mortality.	Population.
1893	2317	51.90	232,000
1894	2091	49.20	241,000
1895	1825	46.90	250,000
1896	1791	45.80	260,000
1897	1502	41.65	275,000
1898	1346	40.32	280,000

Showing a decrease in the actual number of deaths of nearly 60 per cent, although there has been an increase in the

population of 58,000 during the same period. This 40.32 infant mortality is the lowest ever recorded in this city. It is but the natural outcome of years of faithful and persistent labor by those in charge of this department in devising and adopting measures for regulating the sale and improving the quality of the most important of all infant foods, viz. Milk.

Unfortunately our jurisdiction does not extend beyond the city limits ; we are unable therefore, to reach a majority of the shippers supplying milk to this city. These dairies are principally located in the surrounding counties, and send in their daily supply by rail. Complete records, however, of the milk furnished by these shippers, are kept at this office, which are open for inspection to all dealers and which give an exact statement as to the quality and condition of the milk supplied.

Whenever such milk should prove to be below the standard required, the consignee is immediately notified, and warned not to dispose of the same under penalty. In this way we succeed in partly controlling even these outside shippers, who, for fear of losing their patrons, are forced to supply a quality of milk that at the very least must be up to the standard required by our City Ordinance.

During the past year 6,919 samples of milk were collected and analysed by this department. Of this number 6,328 were collected about the city from wagons, stores and milk depots, representing the quality of the milk as delivered to the consumer. The percentage of butter fat in all these samples gave a total of 3.76. Three hundred (300) samples were found to be below the standard required by our milk law, and in the majority of these cases the samples were obtained from groceries, bakeries and candy stores. In nearly all the milk had been skimmed. One hundred and forty-eight (148) of the offenders were taken into court. In forty-three (43) of these cases fines were imposed ranging from five dollars ($5) to twenty-five dollars ($25), amounting in all to $455. One hundred and two (102) were left off with paying costs and in three (3) cases sentence was suspended.

Of the eight hundred and fifty-three (853) samples taken at the various railway depots, only twenty-one (21) were found to be below the legal requirements. The butter fat in these samples averaged 3.8 per cent.

That a good quality of milk has a decided effect in reducing the mortality rate among infants has been demonstrated in other cities. Take for example the city of Rochester, N. Y.: here, in 1896, the number of deaths occuring among infants was six hundred and forty. The following year the city established, under the direction of the health department, a dairy and milk depot of its own, and a pure article of pasteurized milk was sold, solely for the purpose of infant feeding; this commendable and novel procedure on the part of the city had as an effect an immediate and decided decrease in the number of deaths among the children, so that in 1897 the number of deaths recorded was only four hundred and forty as against six hundred and forty for 1896, a reduction of nearly one-third.

Dr. G. W. Goler, in his Annual Report of the Health Department for 1897, describes the process as follows:

"We established a milk depot in one of the most populous districts of the city, where we supplied milk in nursing bottles, ready for feeding, after the plan of Siebert, of New York City, slightly modified to meet the small fund available for this purpose. For this depot we had a large, light, newly-papered, clean store with counters dividing it in half. In the rear of the counter a long work table, gas stove, large sink and large refrigerator were placed. A supply of four and eight ounce nursing bottles and corks, together with an Arnold sterilizer, capable of holding six dozen bottles and the necessary cleaning appliances, etc., completed our outfit. At this depot was stationed a nurse, whose services were donated by the Rochester City Hospital. A woman to wash bottles assisted the nurse.

The milk was received from cows that had passed the tuberculin test and who were daily groomed, well fed and watered, and their udders well washed. The cows were inspected by a milk inspector. The milk was received in squat twelve quart cans belonging to the department. These cans were sterilized for forty-five minutes in the steam sterilizer and then sealed. Around the neck of these cans were placed a wide rubber band and a sterile paper envelope containing two squares of sterile cheese cloth sufficient to cover the two mouths of the cans. Through one of these cloth squares the cow was to have been milked directly into the sterilized can. When the milking was finished, the first piece of cloth was to have been thrown away and the second piece placed over the mouth of the can, while the can was

placed in ice water to cool. When the milk was received at the depot it was immediately prepared, pasteurized and put in bottles as indicated in Siebert's table.

When a mother came to the depot for milk, the nurse, in the absence of direction from a physician, advised about the general care of her child, using the little pamphlet as a guide. If the mother was nursing her child, the nurse endeavored to have her continue to do so, if the age, weight and general development of the child seemed to indicate that it was best. If the child was a bottle-fed child, the nurse weighed the child and, in the absence of any direction from the physician, directed the mother how to feed it. The milk was sold in nursing bottles only, at the uniform price of about two cents per pint, the cost of the milk. No milk was sold by measure. Milk was only sold after the weight and general development of the child had been observed by the nurse."

The good results obtained by this process are very apparent when noting the death rate for 1897, which was 22 per cent of the total mortality, or 2.58 in one thousand of the population.

The expense connected with the introduction of a similar system in Milwaukee would be fully recompensed by the good results obtained; the lives of hundreds of little children might thus be saved, that at present succumb to gastro-intestinal diseases, as a result of the poor quality of the milk given to them as nourishment. With an appropriation, sufficient to establish such a system in our city, under the supervision of the Health Department, the result would be a decided drop from our present 40.32 per cent mortality among children.

The greatest number of deaths among infants is caused by diseases of the intestinal tract, and a large majority of these can be traced directly to improper food or carelessness in handling and preparing the same. With this object in view, and with the hope of improving upon these conditions, this department had the following information printed in pamphlet form, a copy of which was forwarded, during the hot summer months, to every household from which a birth was reported at this office.

GENERAL RULES

FOR THE

MANAGEMENT OF INFANTS DURING THE HOT SEASON.

Most of the diarrheal diseases of children, and especially those occuring during the summer months, are primarily due to improper feeding and lack of general sanitation. With the object in view of lessening the prevalence of these maladies, the Department of Health recommends the following rules for the general management of infants, especially during the hot season:

RULE 1. Bathe the child once a day in luke-warm water, as the health of the child depends much upon its cleanliness. If the child be feeble, sponge it once or twice a day with luke-warm water, to which a very little alcohol or vinegar has been added.

RULE 2. Avoid tight bandaging. Have the inner garment of light flannel and the remainder of the clothing light and cool, all being sufficiently loose to allow free play of the body and limbs. Always undress the child at night and put on a cool, light garment, never using the same garments at night that are used during the daytime and vice versa. On removing the garments, hang those that are not to be used near an open window that they may be thoroughly aired before being used again. Use clean diapers, and change them frequently, never using one that has been "dried" before it has been thoroughly washed in boiling water.

RULE 3. The child should sleep by itself in a cot or cradle. It should be put to bed at a regular and early hour, and it is well to teach children, when very young, to go to sleep without being rocked or nursed in the arms. Without the advise of a physician, never give sleeping drops, cordials, soothing syrups, etc., as yearly many children die from poisonous effects of these drugs. Whenever a child frets and does not sleep, if it is not ill, it is usually hungry, or perhaps thirsty. A small amount of boiled water, cooled, will often satisfy a child, and it is a good practice to give them a small amount at frequent intervals during the day. Never quiet a child by candy, or by cake, as they are the common causes of diarrhoea and other complaints.

RULE 4. A child needs plenty of fresh air. In the cool of morning and early evening have it out of doors. Whenever it seems to suffer from the heat, let it drink freely of water which has been previously boiled and cooled. Never allow a child to remain in a room in which washing or cooking is going on. The influence of excessive heat reduces the vitality of infants.

RULE 5. Keep your house sweet and clean, cool and well aired. In very hot weather keep the windows open day and night, and never allow the room to smell "close." Do not allow slops, soiled diapers, etc., to remain in the room, as such poison the air and are not conducive to health. If foul odors are noticed arising from the sink or closets, place in them a small amount of chloride of lime, such as may be procured

at any drug store. If this does not do away with the nuisance, report the same to the Department of Health, and such will be investigated.

RULE 6. The best food for young infants is the mother's milk. Never attempt to wean a child just before or during the summer months, unless advised to do so by a physician. When there are existing circumstances, which absolutely require weaning, consult a physician, so that the proper precautions may be taken to prevent the child becoming ill. When the mother has not enough nurse, it is not advisable to entirely wean the infant during the summer months, but give, besides the breast, good goat's or cow's milk. Do not nurse the child oftener than every two or three hours during the day, and as seldom as possible during the night, avoiding as much as possible nursing when the mother is over-heated or greatly fatigued.

RULE 7. If the child has been brought up "on the bottle" the best diet for it is milk, either from the goat or cow. Goat's milk is nearest to that of the mother's and cow's milk is next. It is necessary to be certain that the milk used is not skimmed and is pure. As soon as milk is received from the dealer, it should be placed in clean, closed cans or vessels in a cool, well ventilated place. In hot weather it is advisable to sterilize all milk (described in Rule 10) soon as received, as this insures it remaining sweet a greater length of time. If a child thrives on milk diet, no other food whatsoever should be given while the hot weather lasts. Articles of diet, such as sago, arrow root, potatoes, corn flour, bread, crackers and certain patent foods, which contains starch, must not be depended upon as food for young infants, and this especially applies to those infants who have not cut their front teeth.

RULE 8. Evidence of health in babies:

- No vomiting.
- Regular increase in weight.
- One to three stools a day.
- Child quiet.
- No diarrhoea during teething.

One of the most common causes of vomiting is overfeeding.

In hot weather, if a child becomes feverish, restless, vomits frequently and has numerous loose stools, consult a physician, and in the meantime, abstain from feeding for a few hours, give cool water to drink and sponge the body with cool water.

RULE 9. All bottles and nipples should be thoroughly cleansed before being used a second time. This can be accomplished by washing the bottles in boiling water and soaking the nipples, for a short length of time, in water in which a little soda has been added, great care being taken to thoroughly remove all traces of the soda, by rinsing them inside and out in plain water. The only desirable nursing outfit is a plain bottle with an ordinary rubber nipple, without a tube. It is a good plan to have two or more such outfits that they may be used alternately.

RULE 10. Method for sterilization of milk. The utensils necessary are:

(1) A sterilizer. This can be easily made from an ordinary tin

pail or pot, about ten inches deep by nine inches in diameter, having a tightly-fitting tin cover. Perforate the cover with eight holes, each an inch in diameter. The holes should be arranged in a circle, midway between the border of the cover and its center. The center should also be perforated with an opening of the same size.

(2) A wire basket of sufficient size to hold several nursing bottles. (Such baskets are sold in the shops for this purpose.)

(3) Rubber corks for the bottles.

(4) A bristle brush for cleaning bottles.

DIRECTIONS.—(Koplik.)—Place the milk, pure or diluted, (as doctor may direct) in nursing bottles, and place the latter in a wire basket. Put only sufficient milk for one nursing in each bottle. Do not cork the bottles at first.

Having previously poured about two inches of water into the tin pail or pot, and brought it to the boiling point, lower the basket of nursing bottles slowly into the pot. Do not allow the bottles to touch the water, or they will burst. Put on the perforated cover, and let the steaming continue for ten minutes; then remove the cover and firmly cork each bottle. After replacing the cover, allow the steaming to continue fifteen minutes longer in the winter and twenty minutes longer in the summer. The steam must be allowed to escape freely, or the temperature will rise too high. The process of sterilization is now completed.

Place the basket of bottles in a cool, dark place in an ice chest. The bottles must not be opened until just before the milk is to be used, and then it may be warmed by plunging the bottle in warm water. If properly prepared, the milk will taste but little like boiled milk. There will not be a thick ring around the inside of the bottle, and no butter will be seen floating on the surface.

The temperature attained under the conditions stated above will not exceed in extreme cases 188 degrees F.

Milk should be sterilized when it is as fresh as possible, and only sufficient milk for twenty-four hours should be sterilized at one time. If, after nursing, the infant leaves some milk in the bottle, this should be thrown away.

When ice cannot be procured, milk in bottles may be kept cool by wrapping them in a cloth saturated with water, evaporation keeping them cool.

F. M. SCHULZ, M. D.,
Health Commissioner.

This Department labors with increasing energy to improve the quality of the milk delivered in this city for consumption, and with the passage of the proposed ordinance (vide infra), at present before your honorable body, another important step towards this end will be attained.

This ordinance provides regulations not only for the sale of milk but also of cream, which, heretofore, has been sold

without restrictions. It has occurred repeatedly that samples of cream, examined by this Department, averaged as low as 6 and 7 per cent of butter fat. The proposed ordinance requires as a standard 15 per cent. It furthermore provides for the cleanly condition of the dairies, milk depots, and wagons, the proper care of the cows and stables, as well as the health and cleanliness of all persons concerned in the handling and disposing of milk and cream. The ordinance reads as follows :

ORDINANCE.

To regulate and provide for the sale of milk and cream within the City of Milwaukee, and to license venders thereof.

The Mayor and Common Council of the City of Milwaukee do ordain as follows:

SECTION 1. No person or persons shall sell milk or cream within the City of Milwaukee without first having been licensed to do the same.

SEC. 2. Every milk or cream vendor selling, offering for sale, exposing for sale, exchanging or delivering, any milk within the limits of the City of Milwaukee, shall pay the sum of ..... Dollars for each store, place of business, wagon or other conveyance from which milk is sold or delivered.

If any person or persons, firm or corporation, commence or engage in the traffic or handling of milk or cream after the first day of May, he or they shall pay a fee and procure the license in their case required, which license so issued shall be good for the period ending with the first day of May following the issuance and delivery thereof.

SEC. 3. On and after the first day of May annually licenses shall be issued by the commissioner of health to all applicants therefore who have complied with the provisions of this ordinance. Before the issuance of the license every vender of milk or cream shall make written application therefor on a printed form provided for that purpose, on which shall be stated :

(1) The name, residence, post office address and location of the business place or places of the applicant.

(2) The number of cows from which milk is obtained for sale or controlled by the applicant, and the kinds of feed which the cows are given.

(3) If applicant does not keep cows, the source of his milk supply.

(4) The number and description of each and every wagon, carriage or vehicle used by said applicant in the milk and cream business.

If after the issuance and delivery of the license, any change be made in the location of the place of business, or of the number of

cows named in such application, notice thereof must forthwith be given in writing to the Commissioner of Health.

SEC. 4. The said Commissioner of Health shall not issue any permit for a license unless he is satisfied with the cleanly and sanitary condition of the stables, cows, wagons, store or place of business, and all utensils used in handling the milk or cream, that the food given to the cows is pure and wholesome, and that all persons engaged in caring for the cows and handling the milk are free from any contagious disease, and that said persons use proper cleanliness in their work.

SEC. 5. And if after issuing a license to sell milk, the Commissioner of Health shall become satisfied that the provisions of Section 4 of this ordinance are being violated, he shall forthwith revoke the license issued to such person or persons, and no new license shall be issued until the unsanitary conditions have been rectified and all other provisions of this ordinance are complied with.

SEC. 6. The Commissioner of Health or any inspector of the Health Department designated by said commissioner, shall have the right to enter and inspect or examine all places or wagons where milk is kept or exposed for sale within the limits of the City of Milwaukee, in order to ascertain whether the owner thereof is caring for said milk in a sanitary manner and in such a way as not to endanger the lives and health of the citizens of Milwaukee. And said inspector shall have the right to take samples of milk or cream not exceeding one quart from any can, vessel, bottle or other receptacle, for the purpose of inspecting, testing and analyzing said milk, and whenever a sample or samples so found and taken shall not correspond with, or shall be in violation of the requirements of this ordinance, the person or persons, firm or corporation in whose possession, care, custody or control such milk or cream may be found, shall be deemed guilty of a misdemeanor and punished as hereinafter provided.

SEC. 7. No milk or cream shall be sold or exposed for sale or transported in any wagon or other conveyance which is not provided with a close cover, and such covering shall be sonstructed that it shall not come in contact with the cans, bottles or vessels containing the milk, and shall protect such milk and the cans, bottles or vessels containing the same from the sun and rain, and as far as practicable from the dust and other impurities of the air.

SEC. 8. No milk shall be sold or exposed for sale from any wagon or other conveyance unless it has painted thereon, on both sides thereof, in a conspicuous place and in legible Roman letters not less than five inches in height, the name of the milk vender and the number and name of the street of the place of business, and the number of the wagon, and if such vender or dealer sells skimmed milk, the words "skimmed milk" shall be painted on said wagon, in such manner as aforesaid.

SEC. 9. All persons, firms or corporations who own or keep a dairy in the City of Milwaukee, or who send milk to said city, shall maintain their premises free from any accumulation of refuse matter

or offal, which shall be removed frequently, so as not to endanger the public health, or the health or cleanliness of the cows.

SEC. 10. All cans, vessels, receptacles and vehicles used in the handling of milk and cream, as well as all packages, refrigerators or compartments of stores, or other places where milk or cream is kept, stored or hauled, shall be kept or maintained scrupulously neat and clean, and shall be kept free from the presence or vicinity of any article of any kind likely to contaminate or injuriously affect the sweetness, quality or condition of the milk or cream.

SEC. 11. No person having an infectious or contagious disease, such as cholera, smallpox, membraneous croup, measels, rotheln diphtheria, whooping cough, typhoid fever, typhus fever, scarlet fever, or consumption (Phthisis pulmonalis), or having recently been in contact with such person, shall milk cows, or handle cows, bottles, dippers, measures or other vessels used for milk or cream intended for sale, unless all danger of communicating such disease to other persons shall have passed. And no milk or cream shall be sold or dispensed for use as food from any house, shop or other place in which there is a case of infectious disease, as aforesaid, until all danger of contagion therefrom has been removed, and permission in writing is obtained from the Commissioner of Health authorizing the sale of milk or cream in said house, shop or other place.

Whenever a case of infectious disease, as aforesaid, is found in any building or place from which milk or cream is sold or disposed of for food, or from which any wagon or conveyance of any kind is used to distribute milk or cream for food, the Commissioner of Health or inspector authorized by him to do so, shall forthwith seize and destroy all of said milk or cream found upon said premises; and it shall be unlawful for any person or persons, firm or corporation to sell or dispose of any milk or cream from said premises in any manner whatsoever until all danger of contagion from said diseases, or either of them, has been removed, and permission in writing is obtained from the Commissioner of Health authorizing the sale of milk or cream from said place or premises.

SEC. 12. Any vender of milk or any servant of such vender who shall sell or expose for sale any milk from which the cream or any part thereof has been removed, shall offer for sale and sell the same as skimmed milk, and not otherwise, and any can, vessel or package containing such milk shall have conspicuously and firmly attached thereto a steel or metal plate tab on which shall be engraved the words "skimmed milk" in large, plain, distinct letters; said steel or metal plate shall not be less than three by five inches in size, and the words "skimmed milk" shall be painted on the wagon as aforesaid.

SEC. 13. Whoever, by himself or by his servant or agent, employee, or milk wagon driver of any person, firm or corporation, sells, offers for sale, exchanges, delivers or transports or carries for the purpose of sale, exchange or delivery, or has in his custody, possession, care or control with intent to sell, offer for sale, exchange or deliver, or exposes or offers for sale, exchange, transportation or delivery, any milk or cream which is unclean, diluted, impure, unhealthy, diseased,

unwholesome, adulterated, or not of the standard or quality provided for by this ordinance, or milk or cream to which water or any foreign substance has been added, or milk or cream produced from sick or diseased cows, or milk or cream produced from cows kept in unclean, filthy or unhealthy condition, or milk or cream from cows fed on the refuse of slops from distilleries, vinegar factories, or any similar slops, mash or refuse, or any other than good and wholesome food, or milk or cream that has been exposed to, or contaminated or affected by the emanations, discharges or exhalations from any human being or animal sick with any contagious or infectious disease by which the health or life of any person may be endangered, compromised or in any way affected by such disease, shall be deemed guilty of a misdemeanor, and punished as hereinafter provided.

SEC. 14. The inspectors of milk shall have power to open any can, vessel or package containing milk, whether sealed (locked) or otherwise, or whether in transit or otherwise. And if upon inspection, the said milk or cream is found to be filthy, or the cans or other containers are in an unclean condition, said inspector may then and there condemn the milk or cream so deemed by him to be filthy, and pour the contents of such can, bottle, vessel or package upon the ground forthwith.

It shall be the duty of the inspector to make a written entry in a book provided for that purpose, that he has condemned and destroyed so many gallons of milk or cream, and that he has taken samples of the same and has delivered them to the city food analyst for examination, and the said food analyst shall keep a correct account of each and every analysis or examination made by him, which shall at all times be open for inspection.

It shall be the duty of said inspector to keep a complete record of his proceedings as inspector, giving a full account of all inspections of milk made by himself, or his assistants, including the name of such person, firm or corporation, owning or claiming to own the milk so inspected, together with their places of business or residence or the railroad station used for shipment or delivery thereof, and the results of the analysis in all such cases.

SEC. 15. No milk or cream shall be sold, kept, offered or exposed for sale, stored, transported, exchanged, carried, delivered or in any manner disposed of, drawn from cows within fifteen days before and twelve days after parturition, nor shall the same be mixed with any other milk or cream for such purpose.

SEC. 16. No milk shall be kept, sold or offered for sale, stored, exchanged, transported, conveyed, carried or delivered, or with such intent as aforesaid be in the care, custody, control, or possession of any one if it contain more than 88 per centum of watery fluids, or less than 12 per centum of total solids, of which total solids three of the per centum shall be butter fat.

Any milk shall be held to be adulterated which does not contain at least 3 per centum of butter fat, or which contains more than 88 per centum of watery fluids, or less than 9 per centum of solids exclusive of butter fat.

The Commissioner of Health shall have power to revoke the license of any person or persons, or firm or corporation which shall have been convicted twice in any one year, for a violation of the foregoing section, and also if in his opinion any dealer or vender of milk or cream is not conducting his business in a sanitary manner, and no new license shall be granted to said vender until he shall have removed the conditions which were prejudicial to the health of the community.

SEC. 17. No cream shall be sold, offered for sale or exchanged, delivered or transported or carried for purpose for sale, offering for sale, exchange or delivery, that contains less than 15 per centum of butter fat, or that is taken from any impure, diseased, unhealthy, unclean, adulterated or unwholesome milk, or milk to which any foreign substance of any kind has been added, or milk from cows fed on refuse or slops from distilleries, vinegar factories, or any similar slops, mash or refuse, or any other than good and wholesome food.

SEC. 18. Nothing in this ordinance shall be so construed as to prohibit the use or sale of what is known as buttermilk, provided the same is produced from pure and wholesome milk. Should any buttermilk, however, be sold, kept offered or exposed for sale, exchanged or transported, conveyed or carried, or be in the care, custody, control or possession of any one, with the intent as aforesaid, which is not the product of pure and wholesome milk, the offenders shall be deemed guilty of a misdemeanor and shall be punished as hereinafter provided for.

SEC. 19. All milk and cream from sick and diseased cows, or cows fed on refuse or slops from distilleries, vinegar factories, or any similar slops, mash or refuse, or that is dangerous, or that may affect or be detrimental to life or health, shall, upon discovery thereof by analysis or test made, or otherwise, be confiscated, forfeited and immediately destroyed by or under the direction of the Commissioner of Health, who shall, if done in good faith, be held harmless in damages therefore, in any suit or demand made.

SEC. 20. If any cow be sick or diseased, the owner or person in charge thereof shall not sell, offer for sale, exchange or deliver or keep or expose for sale, exchange or deliver the milk or cream thereof, but shall at once destroy the same. If, in the opinion of the Commissioner of Health or any inspector, any cow is afflicted with a contagious or infectious disease, he shall direct the owner or person in charge thereof to forthwith remove said cow from the premises to a place where it may not spread or cause contagion or infection. A violation of this section shall be deemed a misdemeanor, and upon conviction the offender shall be punished as hereinafter provided for.

SEC. 21. No person or persons, firm or corporation, shall keep or have in his or her possession any slops or refuse of any distillery or vinegar factory, or any similar slops, mash or refuse, to feed the same to any milch cow or cows.

SEC. 22. Any person violating any of the provisions of this ordinance shall be deemed guilty of a misdemeanor, and upon conviction thereof be fined the sum of not less than twenty-five dollars ($25) nor

more than one hundred dollars ($100), for each and every offense, or by confinement in the House of Correction in and for Milwaukee county not exceeding ninety days.

SEC. 23. All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

SEC. 24. This ordinance shall take effect and be in force from and after its passage and publication.

DIPHTHERIA.

During the year, 343 cases of diphtheria were reported to the Health Department with 61 deaths, a percentage of 17.7; this being the smallest number of cases reported and the lowest percentage of deaths since 1891.

In 1892 there were 1193 cases with 400 deaths, or 33.5 per cent; in 1893 there were 620 cases, with 209 deaths, or 33.7 per cent; in 1894 there were 436 cases and 165 deaths, or 37.8 per cent; in 1895 there were 375 cases and 112 deaths, or 30 per cent; in 1896, 919 cases with 198 deaths or 21.5 per cent and in 1897, 708 cases with 138 deaths or 19.6 per cent.

The decline in the number of cases during the past year is very striking, there being 365 cases less than in 1897, and the per cent of all deaths but 1.83 as against 3.80 for the year 1897.

The deaths from diphtheria have steadily decreased since the use of antitoxine has become general, as is well shown by above figures, the percentage of deaths from this disease being but one half of what it was in 1894, or before antitoxine was in use.

In order to determine with greater accuracy the number of cases treated by antitoxine in the city, a letter was directed by the department to the physicians, asking them to report the number of cases treated during the months of December, 1898, and January, 1899, with or without antitoxine, with the following results:

Whole number of cases reported	67
Number in which antitoxine was used	60
Number in which antitoxine was not used	7
Number of deaths in cases treated with antitoxine	4
Number of deaths in cases treated without antitoxine	3
Whole number of recoveries	60
Whole number of deaths	7

Of the seven cases treated *without* antitoxine three died, showing for these a mortality of 43 per cent; while of the sixty cases treated *with* antitoxine but four died, showing a mortality of but 6⅔ per cent.

The correct and speedy diagnosis of diphtheria has been greatly facilitated by the placing in drug stores in all parts of the city, culture tubes and apparatus for obtaining cultures of bacteria present in doubtful or suspected cases. These cultures are sent to the department, and in a very short time a bacteriological diagnosis is possible. Physicians have been quick to perceive the advantages to be gained by this new departure, and as a result daily bacteriological examinations were required. The use of antitoxine, however, should not be postponed until the bacteriolgical examination is made, as if the case is not diphtheria no harm has been done, while if it is, valuable time may be lost by waiting and the patient's life placed in jeopardy thereby.

SCARLET FEVER.

During the year 1898, 108 cases of scarlet fever were reported with 2 deaths; while in 1897 there were 89 cases with 3 deaths and in 1896, 120 cases with 4 deaths.

INFLUENZA.

An epidemic of influenza of considerable severity swept over the country during the winter, 107 deaths resulting either directly or indirectly from this disease, in this city.

During the month of December, 7 deaths were reported from influenza; in January, 66 deaths; February 29 and in March 5. The per cent of all deaths from this disease was 3.20, while in 1890 it was .64; in 1891, 1.21; in 1892, 2.47; in 1893, .94.

The greatest number of deaths occurred in old people, there being 18 deaths between the ages of 60 and 70; 20 deaths between 70 and 80 and 13 deaths between 80 and 90.

Influenza was the only cause of death given in 18 cases. In 75 cases influenza was the primary cause, death resulting

from some complication of which pneumonia was most common, 35 deaths being reported as due to this complication.

TYPHOID FEVER.

It has been so clearly proven that Typhoid fever is present in a community in direct ratio to the quality of its water supply, that it might seem needless to dwell further upon this subject. Did communities act upon their knowledge of this truth, typhoid fever would in the future, be known as a matter of history and not through personal experience. Every great cause produces its martyrs, and thousands must perish before eyes—blinded by bigotry—are opened to the truth.

The two ravaging diseases that claimed their large quota of victims before easily attained help came, are small pox and typhoid fever. We must marvel when we learn that enlightened communities refuse to see the benefits of vaccination, and we are not taken by surprise, though terror stricken, when learning in our own day how small pox is at various times singling out the unvaccinated districts and decimating them, leaving untouched the individuals who thought discretion the better part of valor. A similar history do the ravages of typhoid fever show: many were the epidemics and endemics that killed by the hundreds and thousands; and what was invariably the primary cause? Polluted water, only and always. The remedy is not far to seek, and its recognition and application have saved hundreds of thousands of lives. In Vienna alone where formerly there were annually hundreds of deaths from typhoid, the disease has become a rarity. In Munich and other European cities, and in Boston, the benefits of an improved water supply have been felt too. But as patriotic Americans we must stand aghast at the sight of the death struggle that has engulfed the city of Philadelphia. So often had the cry "pure water" been heard, and so little heeded was the prayer, that at last the much dreaded invasion has come. During the year 1898 there were 4749 cases of typhoid with 639 deaths. This figure not including 1348 soldier patients. During the past few months a most awful

epidemic of typhoid has been raging in the same city, there being reported weekly from 250 to 450 cases, with a mortality of over 10 per cent.

During the year 1898 there were in this city 132 cases of tyyhoid fever, including twelve in returning soldiers. Of this number forty-six died, making a mortality of 35 per cent. This enormously high death rate is, however, misleading, for it is highly improbable that of 132 typhoid cases, forty-six should result fatally, unless it be in an epidemic of exceeding malignancy. We must conclude then that the number of reported cases is but a fraction of the actual typhoid morbidity, and if we accept 10 per cent as a sufficiently high and liberal estimate of the mortality in this disease, we must conclude that instead of there having existed but 132 cases as reported, there must have been at least 460. This is not a fanciful calculation nor a product of the imagination, and I assert without hesitation that the reported cases of typhoid fever in this community have no statistical value whatever. Although statistics of cases are valueless this is not true of the relative number of deaths from this disease.

There are 515 reported deaths from acute intestinal diseases. Exactly what proportion of this mortality is to be attributed to water infection can, of course, not be estimated, but it is safe to assume that an interdependence of cause and effect can be traced in many cases. This brings us to the question of wells whose contents are used for drinking purposes. The Health Department Analyst, Dr. Bennett, examined specimens of water taken from 150 wells in different parts of the city, and selected because of suspicious cases of enteric diseases that had developed among the users of the water. Of the 150 samples examined, only thirty were found to be usable, and in many cases a direct relation between typhoid and other enteric infections and polluted well water could be demonstrated. These wells are usually too shallow, poorly constructed, in more or less proximity to cesspools and privies whose walls are not impervious, thus permitting the

contamination of the soil. I would recommend that a registry of all wells located in the city be kept, and that there be an occasional inspection of their condition, since the wells are a fruitful source of typhoid infection in this city. The benefits of such a regulation can easily be appreciated. A more radical measure, and certainly one more calculated to efficiently check the disease, would be the filling up or abolition of all wells whose water is used for drinking purposes. The water supply and the drainage within the city limits are of good quality, and there can be no valid reason for longer tolerating these germ-laden, disease-giving wells.

TUBERCULOSIS.

Tuberculosis—a disease so indigenous to the soil of all countries, so constantly with us in its many forms, so destructive that fully one-seventh of all deaths are attributable to its ravages — is at last being accorded due recognition in the community. That the disease finds its entrance into the human body by means of foods, through the inhalation of germ-laden air, and in other ways, has long been known, but it is only within recent years that its positively recognized infectiousness has received the moral support of the medical profession and of the laity.

The mortality of other infectious diseases has markedly diminished because of preventive measures, and it is to be hoped that the classification of tuberculosis among the infectious diseases, will do much to mitigate the severity of this scourge.

Our object now is twofold: The prevention and the cure of the disease. To attain the former we may name the following desiderata: Inspection — thorough, systematic and frequently repeated—of cattle, and the bacteriological examination of milk; inspection of bakeries, meat markets, and the examination of food stuffs; inspection of factories; laws — thoroughly enforced — making it an offense to expectorate in a public conveyance; instructing the healthy how they may with impunity live with consumptives, and in the methods of

disinfecting sputum and other contaminated material; instructing the sick how to prevent further infection of their own systems and endangering the health of others.

Through the excellent work of the Buffalo Health Department it has recently been discovered that cast off clothing of consumptives may prove a source of infection, and it is proposed to exercise a certain degree of municipal control over second hand clothing stores.

These are some of the modes of prevention that can easily, and ought by actual legislation to be exercised in every community. So strong is this sentiment of the needless sacrifice of thousands of lives annually on the altar of neglect, that in May of this year a meeting of the International Congress for the Prevention of Tuberculosis, will be held in Berlin, under royal patronage, to deliberate upon the ways and means of combatting the scourge. We confidently look forward to results that will prove an everlasting blessing to mankind.

The second object we are seeking with reference to tuberculosis, is its cure. It may not be considered within the province of the city or state to meddle with the healing art, but when one begins to realize what a financial loss every community annually suffers through much preventable illness among the poor, the necessity of supporting these and those dependent upon them, and their withdrawal from the list of wage-earners, the consideration of the subject of treatment of the disease becomes of vital importance. The isolation and segregation of tuberculous individuals in hospitals and sanitaria have met with such signal success and such benefit to the afflicted ones, that this mode of systematic treatment is no longer to be considered an experiment. Germany and Austria have demonstrated the value of these institutions, and scarcely a state is without one or more of them; new sanitaria are springing up all over the continent. A wave of enthusiasm has struck England, and royal hands are promoting the good work. The United States has fallen in

line, and Massachusetts is the first state in the union which, recognizing its duty towards its citizens, has built and equipped a state institution for the treatment of tuberculosis. New York is making a strong effort and will soon follow suit, and a bill is now pending at Albany "to allow citizens to establish, equip and maintain, outside their corporate limits, and with the approval of the State Board of Health, hospitals for the regular treatment of consumptives." Pennsylvania, too, is active in this direction. It is authoritatively stated that fully 50 per cent of cases of tuberculosis, if taken in hand early, will recover under proper hygienic surroundings and treatment in sanitaria.

The day will come when those afflicted ones who have not the means of visiting Colorado, Florida or the Riviera, will find in all progressive cities and states, institutions where they may derive benefit from the methods of treatment that are being recognized as life saving measures.

To be among the first to establish such institutions—truly monuments to humanity and progress—would be deserving of the highest praise, and it would indeed redound to the everlasting honor and credit of the State of Wisconsin and this its metropolis—to be among the pioneers in the establishment of institutions where Nature's remedies, fresh air and sun shine, can be used to the best advantage. I would strongly recommend the early, earnest and favorable consideration of this matter.

Of no disease is it truer than of tuberculosis, that an ounce of prevention is worth a pound of cure. It would truly be ideal could we answer the call for sanitaria for the treatment of consumptives with the words: There is no need of your institutions, for when our consumptives die, the disease dies with them, adequate protection being now afforded our people against any possible contagion.

During the past year tuberculosis claimed 430 deaths in this city alone. This figure includes cases of frank tuberculosis only, and leaves uncounted numerous cases of intesti-

nal, meningeal and visceral tuberculous infection in which it may have been impossible to make a positive diagnosis. Add hereto the several hundred consumptives who are living in the community, and the sum total of afflicted ones whom this city harbors in the course of the year reaches an enormous figure. These figures ought and can be reduced. We trust that in order to bring about this reform of prevention it will never be necessary to proscribe the sick or placard and quarantine their dwellings. The consumptive need not shun society, nor society him, if he but observe reasonable precaution in regard to matters of personal hygiene and cleanliness.

In order to limit the spread of consumption, I desire to make the following recommendations, and trust it will be possible to carry them out:

(1) Cattle should be systematically inspected at stated intervals.

(2) Milk should be examined bacteriologically in all suspicious cases.

(3) Bakeries, meat markets and all other places where viands are dispensed, should be periodically inspected, and in addition to investigating their cleanliness and ventilation—more particularly in the case of bakeries—no consumptive should find employment in any such establishment.

(4) Factories are to be inspected to ascertain the number of employes and the methods and means of ventilation.

(5) Expectoration in public places and conveyances—save in proper receptacles—should be interdicted by law, and its commission should be considered a punishable offense.

(6) No person ought ever to spit on the floor. Spitoons should be placed in all rooms, buildings, factories, schools, theaters, corridors, etc. It should be made known that the most frequent source of communication of the disease is the inhalation of dried sputum in the shape of dust floating in the air, more particularly in living rooms and factories.

(7) Physicians should make it their duty to inform their consumptive patients how best to protect themselves against

themselves, and how to act to prevent further spread of the disease to other members of the family.

(8) Physicians should, upon application to the Health Department, be given circulars for distribution to consumptive patients, and a copy, such as follows, of the instructions issued by the New York Board of Health, is recommended.

INFORMATION FOR CONSUMPTIVES AND THOSE LIVING WITH THEM.

Consumption is a disease which can be taken from others, and is not simply caused by colds. A cold may make it easier to take the disease. It is usually caused by germs which enter the body with the air breathed. The matter consumptives cough or spit up contains these germs in great numbers; frequently a million are discharged in a single day. The matter spit upon the floor, wall or elsewhere, is apt to dry, become pulverized and float in the air as dust. The dust contains the germs and thus they enter the lungs with the air breathed.

The breath of a consumptive does not contain the germs and will not produce disease. A well person catches the disease from a consumptive only by in some way taking in the matter coughed up by the consumptive.

Consumption can often be cured if its nature is recognized early and proper means taken for its treatment. In a majority of cases it is not a fatal disease.

It is not dangerous for other persons to live with a consumptive if the matter coughed up by the consumptive is at once destroyed. This matter should not be spit upon the floor, carpet, stove, wall or street, or anywhere except into a cup kept for that purpose. The cup should contain water so that the matter may not dry, and should be emptied into the closet at least twice a day and carefully washed with hot water.

If handkerchiefs are used (worthless cloths which can be burned are far better) they should be boiled in water by themselves, before being washed.

When consumptives are away from home, the matter coughed up may be received in clothes, which should at once be burned on returning home.

Great care should be taken by a consumptive that his hands, face and clothing do not become soiled with matter coughed up; if they do become soiled they should at once be washed with soap and water.

It is better for a consumptive to sleep alone, and his bed clothing and his personal clothing should be boiled and washed separately from the clothing belonging to other people.

When a person is thought to be suffering from consumption, the name and address should be sent at once to the Health Department on a postal card with a statement of the fact. A Medical Inspector from the Health Department will then call and examine the person to see if he has consumption, providing he has no physician, and if necessary, will give directions to prevent others from catching the disease.

Frequently a person suffering from consumption may not only do his usual work without giving the disease to others, but may also get well if the matter coughed up is properly destroyed.

Rooms that have been occupied by consumptives should be thoroughly cleaned, scrubbed, whitewashed, painted or papered before they are again occupied. Carpets, rugs, bedding, etc., from rooms which have been occupied by consumptives, should be disinfected. The Health Department should be notified when they will be sent for, disinfected and returned to the owner free of charge; or if he so desires, will be destroyed.

By order of the Board of Health,

CHARLES G. WILSON, *President.* EMMONS CLARK, *Secretary.*

To these instructions we may add, wiping the dust in rooms with damp cloths once daily.

I wish now to present for your consideration another subject whose importance cannot be overestimated, but which has a bearing not only upon tuberculosis, but also upon other transmissable diseases. I refer to the fruitful source of infection as propagated through matrimonial relations.

So many are the diseases that are born into the world, and so frightful this slaughter of innocents that one almost shrinks from making mention of such a calamitous state of affairs. Every physician can, however, cite numerous instances of direct and indirect transmission of tuberculosis, and the direct transmission of syphilis and gonorrheal infection, and it is no exaggeration to say that many hundreds of innocents could annually be spared loathsome diseases, lingering illness and premature death. How can this be accomplished? Before answering this question let us demonstrate the actual sources and media of this infection, and the means to abolish the cause will then be self-evident. We have reference of three diseases only: (1) tuberculosis, (2) syphilis, (3) gonorrhoea.

(1) Tuberculosis: It is a well recognized fact that the offsprings of tuberculous parents are burdened with a predisposition to development of this disease, both by direct inheritance and by reason of the infected atmosphere into which they are born. Furthermore it has been repeatedly proven that one tuberculous parent has infected the other. It would

be idle to speculate upon the extent of such an infection, and the number of individuals and generations that may be affected by the first ill-advised union.

(2) Syphilis: This name carries with it such horrors of unspeakable vileness, and, being primarily born of vice, is so deserving of condemnation that it is impossible to exaggerate the evil that is wrought through it. A young man, in the belief that a recent attack of syphilis is cured, because apparently all visible symptoms have disappeared, marries, infects his wife, or becomes the father of a syphilitic child. The remote and immediate possibilities in the shape of various manifestations of syphilis in wife or child are awful to contemplate.

That the syphilitic infection sometimes remains latent and attacks the third generation, is too well known to need comment.

(3) Gonorrhoea: Insignificant as an attack of gonorrhoea may seem to one so afflicted, nevertheless so far reaching are its effects, that even syphilis with all its horrors, cannot claim as many or more wretched victims. A young wife is infected by a husband who is either aware of his guilt, or thinks himself cured, a violent inflammation is set up, which may lead to a fatal peritonitis, or to a condition that demands a dangerous and severe operation, which, if not fatal, results either in sterility, or in a life of perpetual suffering, or both; or the offspring — if such there be — may be deprived of sight through the infection of its eyes.

I have but sketched the more common, I may say even daily calamities, free from any coloring or imagination, true to sad facts.

Now, how is this evil to be prevented? Truly marriage— a social necessity — becomes a social calamity when we consider these facts. *No person has a right to knowingly inflict disease or suffering upon another individual.* This must be a dictum that is fundimentally essential to the integrity and welfare of the individual, of the family and community.

Why does the law uphold us in our efforts to prevent infection from such communicable diseases as small pox, diphtheria and scarlet fever? Because there is danger in the contact with persons so afflicted. Why should the law uphold us in our efforts to prevent infection from such communicable diseases as Tuberculosis, Syphilis, and Gonorrhoea? Because there is great danger—particularly through matrimonial relations — of infection of innocent ones, and in the birth of children, who — through inherited or acquired disease — are born to a life of suffering. It is this legalized transmission of disease that an enlightened community ought to tolerate no longer.

I would recommend that laws be passed, as has been done in North Dakota, which provide for the appointment of a commission consisting of three physicians in each county, whose duty it shall be to examine all applicants for marriage licenses.

In Texas a law exists which prohibits the marriage of all epileptics; in the states of Ohio, Maryland and Massachusetts bills have been introduced before their respective legislative bodies, prohibiting the granting of licenses for marriage to the syphilitic, epileptic, dipsomaniac, feeble minded and the consumptive. By thus legalizing marriage, the atrociousness of the present loose system can be remedied, there will be fewer unhappy marriages, fewer divorces and less disease and suffering.

I hereby append a copy of the Marriage Bill at present before the Assembly of the State of Ohio. The bill reads as follows:

A BILL

TO REGULATE THE GRANTING OF MARRIAGE LICENSES.

SECTION 1. Be it enacted by the General Assembly of the State of Ohio:

That within thirty days after the passage of this act it shall be the duty of the probate judge in each county in this state to appoint three persons, who shall be reputable practicing physicians, residents of such county, and no two of them shall belong to the same school of medicine, whose duty it shall be to consider and pass upon all appli-

cations for license to marry, now made to the probate court, and no license to marry shall be granted to persons contemplating marriage unless they shall have received from the persons so appointed a certificate setting forth that such applicants are free from the following ailments, any of which shall be deemed sufficient cause for refusing a license: Dipsomania, true insanity, hereditary insanity, or insanity resulting from vice, primary, secondary or tertiary syphilis, hereditary tuberculosis or consumption.

SEC. 2. Said persons shall be appointed for one, two and three years respectively, and shall hold their office during good behavior, unless sooner removed, as hereinafter provided. All vacancies shall be filled by the probate judge, and the person thus appointed shall be of the same school of medicine as his predecessor.

SEC. 3. The power to remove such persons is hereby vested in the "state board of medical registration and examination," and shall be exercised, after careful investigation, in cases of inefficiency or neglect of duty, or when complaint made in writing, against such persons by anyone who feels aggrieved by their action, is sustained by a majority vote of said board.

SEC. 4. Each applicant for a license to marry shall pay an examination fee of $2.50. Out of the moneys received therefrom, each person so appointed shall be paid, as compensation for his services, the sum of $1,000 per annum, and the surplus, if any, shall be paid into the treasury of the county, to the credit of the general fund. The persons so appointed shall meet at least once in each week and, in addition thereto, as many times as may be necessary, at the county seat, and such meetings shall be held in a suitable place, to be provided by the county commissioners. It is hereby made the duty of the clerk of courts in each county to designate one of his deputies, who shall act as clerk to the persons so appointed, without extra compensation.

SEC. 5. All acts, or parts of acts, inconsistent herewith, are hereby repealed, and this act shall take effect and be in force from and after its passage.

PUBLIC SCHOOLS.

Since November 1898 a system of medical inspection of all public schools in this city, has been adopted. For this purpose the city was divided into five districts, allowing one physician to each district. The time since the adoption of this measure is too short to draw any practical conclusions at the present time, but taking the experience of other cities where similar measures have been in vogue for some time, we notice a decided decrease in the number of contagious diseases among school children. The fact however, has been demonstrated to us even during this short time, that children are

often attending our schools who are suffering from some malady more or less contagious in nature. Such cases, whenever found by our medical inspectors, were promptly removed from school, and not allowed to re-enter until fully recovered.

In the city of Boston the medical Inspectors found, during the last year, 437 children suffering from infectious diseases. In New York City for three months 3675 such cases were discovered, of which number 2625 had parasitic diseases of the scalp, and 700 contagious diseases of the eyes.

Schools are fertile grounds for the propagation of acute infectious diseases. The close communication for five or six hours daily, in rooms generally overcrowded, and in many instances lacking in proper ventilation; the habit among school children of exchanging toys, slates, pencils, etc., the common use of a single drinking cup, are all great factors in the transmission of these diseases.

The following set of rules were distributed among all our public and parochial schools with a view of overcoming some of these defects, reducing the chances of spreading infection and improving the general health of our school children.

SCHOOL HYGIENE.

Children should not sit facing the light.

Let the desks face a wall without windows.

The school room should be so well lighted that every pupil can see to read readily with the book held at fifteen inches from the eyes.

Windows should not be filled up with plants.

A dazzling light is nearly as bad as insufficient light.

The best light comes over the left shoulder and from above.

Sunlight should not fall directly upon the books or slates of the children.

Blackboards should not be between windows.

Where pupils are required to copy work from the blackboard, the teacher should be very careful to write a large and legible hand.

Whenever a child complains that its eyes "ache," it should be excused from its duties and a note sent to the parents.

Teachers should remember that the eyes are often too weak for the purpose of study after measles, diphtheria, scarlet fever, whooping cough, and other diseases of childhood.

Some inflammations of the eyes are contagious.

Young children are often called obstinate when they really cannot see.

In all cases where a child is thought to be injuring the eyes, the teacher should send a note to the parents.

Teachers should suppress the habit among pupils of interchanging pencils, slates, chewing gum, etc.

Children growing rapidly and taking healthful exercise, need much drinking water, as more than 70 per cent of their bodies consist of this substance, which is constantly being lost from the excretory organs. It is no "mere habit to drink water," as has been affirmed by some.

Teachers should encourage the use of the individual drinking cup.

Much good will be accomplished by giving a few plain talks to the children on the vital importance of the functions of excretion, and the consequent importance of promptly attending to all the calls of nature. Sometimes children are compelled to leave the room very frequently on calls of nature. Teachers must be very careful not to detain such when it is really necessary for them to go out, as serious organic disease may thereby be produced.

It is very injurious to sit with wet or damp clothing. Children who arrive at school in this condition should stand about the stove or heaters until dry, or in some cases be sent home.

The children should not run out on wet days during recess, getting feet and clothing wet.

Yawning, drowsiness and restlessness on the part of pupils commonly indicates the need of fresh air.

The ears of children should not be boxed nor pulled, nor

should children ever be struck over the head, nor on the palms of the hands with a ruler. These punishments are dangerous.

Pupils should not ordinarily be deprived of their meals, nor of the periods of exercise.

Eating at recess is not generally harmful to young and growing children.

Children should not be compelled to sit in any one position for a long time.

F. M. SCHULZ, M. D.,
Commissioner of Health.

The ordinary inspections, relating to the sanitary defects in our schools, have had the usual attention as in the past. All told there were 1032 inspections and reports made during the year. Whenever a defect was found in one of the schools the attention of the Superintendent of Schools and the Board of Public Works was immediately called to it. The principal defects found and reported during the year consisted of poor ventilation and offensive urinals and latrines. Following herewith is a complete record of all the public schools in the city.

FIRST DISTRICT SCHOOL.

CASS STREET, BETWEEN PLEASANT AND BRADY.

The ventilation is defective and should be improved.

SECOND DISTRICT SCHOOL.

TENTH AND PRAIRIE STREETS.

In good condition.

SECOND DISTRICT, PRIMARY.

SEVENTH AND PRAIRIE STREETS.

This is one of the older school buildings and really cannot well be brought into first-class condition. The walls and ceilings are much in need of a coat of whitewashing at the present time.

THIRD DISTRICT SCHOOL.

JACKSON AND DETROIT STREETS.

In good condition.

FOURTH DISTRICT SCHOOL.

EIGHTH AND SYCAMORE STREETS.

The old latrines in basement which are useless, and are not properly covered, are occasionally used by the scholars, creating a nuisance; they should be entirely removed. There is also a broken waste pipe in the basement, which has not been properly repaired, leaving a chance for the escape of Sewer gas.

FIFTH DISTRICT SCHOOL.

HANOVER AND PARK STREETS.

In good condition.

FIFTH DISTRICT No. 1.

GREENBUSH AND WALKER STREETS.

The yard space is not properly graded, allowing the surface water to soak through foundation walls on the north west side.

FIFTH DISTRICT No. 2.

JONES ISLAND.

In good condition.

SIXTH DISTRICT No. 1.

FOURTH AND GALENA STREETS.

The ventilation of this school is frequently unsatisfactory, depending upon the direction of the wind, and other meteorological conditions. An extension of the ventilation shafts on the roof, or heating the same by means of steam, gas jets or stoves, so as to create an upward current of air, would certainly remedy this faulty condition.

Annexed hereto, is the Inspector's report.

MILWAUKEE, March 6, 1899.

F. M. Schulz, M. D., Commissioner of Health:

DEAR SIR—I have examined the following public school and found it in following condition:

SIXTH DISTRICT, Fourth and Galena streets.—Ventilation is frequently unsatisfactory, depending upon the conditions

of the weather. A change in the direction of the wind will increase the upward current in some flues, and in others change it, the vigor of the current depending upon the force of the wind and depression of temperature. Some of the ventilating registers are located so near the seats that pupils occupying them become chilled and cold. There are dampers in all flues leading from registers to regulate ventilation; these dampers have to be kept closed all day on some days, thus stopping all ventilation. This is more frequently necessary during cold, than during moderate or warm weather. An extension of the shafts on roof, or heating of shafts with steam coils, gas jets, or any other means to create an upward current, would remedy the faulty ventilation.

The following is a minute of the direction of the current at each ventilating register on this date. Direction of wind northeast.

Room 1, northwest corner, first floor. Temperature 63. Register in cloak room, connected with class room by three open doors. Found ventilator closed. Current when open, good and up.

Room 2, first floor. Temperature 58. Found ventilator closed, current when open, good and up. Ventilator facing back seats five feet from register. This ventilator must sometimes be kept closed all day on account of cold down draught. 27″ x 38″.

Room 3, first floor. Temperature 74. Ventilator in cloak room. Found this ventilator open. Current good and up. 25″x42″.

Room 5, first floor. Temperature 62. Ventilator nearly closed. Current, when open, good and up. Seats facing register, ten feet from register.

Room 6, first floor. Temperature 59. Ventilator closed. Current, when open, good and up. 25″x42″.

Room 7, first floor. Temperature 50. Ventilator open. Current good and up. Seats ten feet distant facing register. 27″x38″

Room 8, second floor. Temperature 66. Ventilator open. In cloak room, current good and up.

Room 9, second floor. Temperature 68. Ventilator closed. Current, when open, good and up. Ventilator within 2½ feet from the back of nearest seat. This register must be closed on account of cold down draught. 25″x38″.

Room 10, second floor. Temperature 73. Ventilator in cloak room open. Current good and up.

Room 12, second floor. Temperature 64. Ventilator closed. Ventilator facing seats, nearest nine feet distant. Current, when open, good and up.

Room 13, second floor. Temperature 64. Ventilator closed. Ventilator facing seats, nearest nine feet distant. Current, when open, good and up. 25″x42″.

Room 14, second floor. Temperature 67. Ventilator found open. Current good and up. Ventilator facing seats nine feet distant.

Room 17, third floor. Temperature 65. Ventilator in cloak room. Open current good and up.

Room 18, third floor. Temperature 64. Ventilator open. Current good and up. Ventilator facing seats nine feet distant.

Hall, third floor. Ventilator open. Current good and up.

Basement. Girls' toilet room register open. Current good and up. The current is often down at this ventilator and has on several occasions frozen the water pipe directly in front of it.

Ventilation in boys' toilet room; draught down. East ventilation in play room; draught down. West ventilation in play room; draught up.

All rooms that are checked marked, ventilation acts similar to rooms nine and two.

P. J. KING,

Inspector No. 112.

SIXTH DISTRICT No. 2.

FOURTH STREET AND GARFIELD AVENUE.

In good condition.

SIXTH DISTRICT, PRIMARY.

ISLAND AVENUE AND HARMON STREET.

In good condition. There are a few loose soldering unions and dried washers below the sinks on the first and second floors in the south hall, which should be remedied.

SEVENTH DISTRICT SCHOOL.

A new building is now being erected.

EIGHTH DISTRICT No. 1.

SEVENTH AVENUE AND MINERAL STREET.

Surface water from the alley on the north side of the building, leaks through the foundation walls, causing dampness of the basement.

EIGHTH DISTRICT NO. 2.

SIXTEENTH AVENUE AND MINERAL STREET.

A defective urinal in the north end of the building, causing a nuisance, should be repaired.

EIGHTH DISTRICT, PRIMARY.

FIFTH AVENUE AND MADISON STREET.

In good condition. Play grounds in front of building are too low, allowing water to accumulate. A few loads of gravel would remedy the defect.

NINTH DISTRICT SCHOOL.

FOURTEENTH AND GALENA STREETS.

In good condition. Flushing system in lavatories might be improved upon.

NINTH DISTRICT, PRIMARY.

TWENTIETH AND BROWN STREETS.

This is a new building and is in good condition.

TENTH DISTRICT SCHOOL.

TWELFTH AND LLOYD STREETS.

The latrines are in bad condition and need repairing. Ventilation is inadequate. This building is an old one and cannot well be brought into a sanitary condition unless completely remodeled.

TENTH DISTRICT NO. 1.

TENTH AND WALNUT STREETS.

In good condition.

TENTH DISTRICT NO. 2.

NINTH AND LEE STREETS.

Floor in urinal for boys in poor condition.

TENTH DISTRICT NO. 3.

NINTH AND WALNUT STREETS.

In good condition.

ELEVENTH DISTRICT SCHOOL.

TENTH AND FOREST HOME AVENUES.

The sewer in the basement of this school is in a leaky condition creating a nuisance and danger of sewer gas contamination.

ELEVENTH DISTRICT, PRIMARY

EIGHTEENTH AVENUE AND MAPLE STREET.

The latrines in this school are in a faulty condition and in need of immediate repair.

TWELFTH DISTRICT SCHOOL.

HANOVER AND LAPHAM STREETS.

In good condition.

TWELFTH DISTRICT, PRIMARY.

WINCHESTER AND SOUTH BAY STREETS.

In good condition.

THIRTEENTH DISTRICT NO. 1.

LEE AND WEIL STREETS.

The roof of this school is defective and in a leaky condition.

THIRTEENTH DISTRICT NO. 2.

FIFTH STREET AND CHRISTINE LANE.

In good condition.

THIRTEENTH DISTRICT NO. 3.

CENTER AND PIERCE STREETS.

In good condition.

FOURTEENTH DISTRICT SCHOOL.

WINDLAKE AVENUE AND BEECHER STREET.

In good condition.

FIFTEENTH DISTRICT SCHOOL.

TWENTIETH STREET AND COLD SPRING AVENUE.

In good condition.

FIFTEENTH DISTRICT, PRIMARY.

TWENTY-SEVENTH STREET AND COLD SPRING AVENUE.

The latrines are defective and should be replaced by new ones of modern pattern.

SIXTEENTH DISTRICT SCHOOL.

EIGHTEENTH AND WELLS STREETS.

In good condition.

SIXTEENTH DISTRICT NO. 2.

TWENTY-EIGHTH STREET AND GRAND AVENUE.

The toilet room should be provided with catch basins to allow them to be properly cleaned and kept in a sanitary condition.

SIXTEENTH DISTRICT NO. 3.

TWENTY-SEVENTH AND CLYBOURN STREETS.

In good condition.

SEVENTEENTH DISTRICT SCHOOL.

DOVER STREET AND KINNICKINNIC AVENUE.

The sewer in this school is defective. The cement joints below the sink in the girls and boys' toilet rooms as well as at boys' latrine, are leaky. Blow off from all four boilers are trapped with check valves which are leaking and ought to be replaced with Cudell traps. The vent from both boys' and girls' latrines ends below the roof. Sparrows have built nests inside of flashing and entirely excluded the vent pipe. The pipe should be extended above the flashing.

SEVENTEENTH DISTRICT SCHOOL.

TROWBRIDGE AND DELAWARE STREETS.

In good condition.

EIGHTEENTH DISTRICT SCHOOL.

LENWOOD AND BARTLET STREETS.

A new structure is to take the place of the old building at present in use.

NINETEENTH DISTRICT SCHOOL.

BROWN AND THIRTY-FIRST STREETS.

Boys' toilet rooms on first, second and third floors are offensive, due to lack of proper ventilation. There is also an escape of gas from the engine room into adjoining play rooms.

NINETEENTH DISTRICT No. 1.

TWENTY-FOURTH AND WALNUT STREETS.

In good condition.

NINETEENTH DISTRICT No. 2.

TWENTY-SEVENTH AND ELM STREETS.

In good condition.

TWENTIETH DISTRICT No. 1.

TWELFTH AND CENTER STREETS.

In good condition.

TWENTIETH DISTRICT No. 2.

TWENTY-SECOND AND CENTER STREETS.

In good condition.

TWENTIETH DISTRICT No. 3.

FIFTEENTH AND HOPKINS STREET..

Latrines in boys' toilet room are defective.

TWENTY-FIRST DISTRICT SCHOOL.

THIRD AND RING STREETS.

In good condition.

TWENTY-FIRST DISTRICT, PRIMARY.

NINTH AND RING STREETS.

Latrines are defective. The toilet rooms on second floor lack ventilation.

EAST SIDE HIGH SCHOOL.

CASS AND KNAPP STREETS.

In good condition.

WEST SIDE HIGH SCHOOL.

TWENTY-THIRD AND PRAIRIE STREETS.

In good condition.

SOUTH SIDE HIGH SCHOOL.

SECOND AVENUE AND MADISON STREET.

In good condition.

SMOKE.

On August 2nd, 1898, the following ordinance, regulating the discharge of dense black smoke in the city of Milwaukee, took effect:

AN ORDINANCE

To prohibit the emission of dense smoke from the smokestack of any boat or locomotive, or from any chimney within the limits of the city of Milwaukee.

The Mayor and Common Council of the city of Milwaukee do ordain as follows:

SECTION 1. The emission of dense smoke from the smokestack of any boat or locomotive, or from any chimney or smokestack anywhere within the limits of the city of Milwaukee, shall, from and after the date when the provisions of this section shall take effect, be deemed and is hereby declared to be a nuisance, provided that chimneys of buildings used exclusively for private residences shall not be deemed within the provisions of this ordinance.

SEC. 2. The owner or owners of any boat or locomotive engine, or engine used in dredging or driving piles, and every officer, manager or agent of any corporation owning any boat, or locomotive engine, or engine used in dredging or driving piles, and the person or persons employed as engineer or otherwise in the working of such engine or engines in any such boat, or in operating such locomotive engine, or engine used in dredging or driving piles, and the owner, lessee or occupant of any building and every officer, manager or agent of any corporation or company owning, leasing or occupying any building, and the person or persons employed as engineer, fireman or otherwise by any such corporation or company, owning, leasing or occupying any building, who shall permit or allow dense smoke to issue or be emitted from the smokestack of any chimney or smokestack within the limits of the City of Milwaukee, shall be guilty of creating a nuisance, and shall, for every such offense, be fined not less than five dollars nor more than fifty dollars, or punished by imprisonment in the house of correction for not more than sixty days. Every day which such nuisance shall continue shall be deemed a separate offense.

SEC. 3. Hereafter, before approving plans and specifications for the erection of any business building or factory within the limits aforesaid, it shall be the duty of the Inspector of Buildings of the City of Milwaukee to see that proper provision is made in said plans and specifications to prevent the emission of dense smoke from the chimney of said building.

SEC. 4. It shall be the duty of the Commissioner of Health and the Chief of Police to cause Section 2 of this ordinance to be enforced and to cause complaint to be made against all persons violating the same.

SEC. 5. This ordinance shall take effect and be in force from and after its passage and publication.

Passed August 1, 1898 C. CORCORAN,
President of the Common Council.

Approved August 2, 1898.

DAVID S. ROSE, *Mayor.* E. M. SCHUENGEL, *City Clerk.*

Immediately upon the passage of this ordinance steps were taken by this department to enforce its provisions. An active crusade against the smoke nuisance and the decided improvement in the decrease of the amount of density of the smoke emitted from the stacks and chimneys of a majority of our manufacturing establishments, has clearly demonstrated the practical value of such an ordinance.

SMOKE MEANS WASTE.

It has been demonstrated over and again that a smoke nuisance really means a loss to the parties responsible for it. Once thoroughly understood this will be the keynote to success in the observance of the smoke ordinance. It is an established fact that it is more expensive to maintain a smoke nuisance than to abate one; this discovery has been made in all the larger cities where laws and regulations governing the same are applied and enforced.

Both theory and practice prove the economy of the abatement of smoke and with a better understanding of this fact the absolute and permanent abatement of this nuisance will be only a question of time. At least one-half of the smoke in Milwaukee is due to bad stoking, ignorance or laziness on the part of the fireman. A poor fireman is a high priced luxury. The sooner the owner of a steam plant discovers this and secures only reliable and intelligent engineers and firemen, as well as equips his steam plant with the proper boiler capacity, and the necessary appliances for consuming the smoke, the quicker will he profit by such proceeding. There are hundreds of good business men in this city who are guilty of

just such false economy, besides producing an annoyance to the community at large with their smoking chimneys.

The keenness of competition will eventually force every shrewd business man to adopt such means and measures as will assure him an annual saving of material which at present goes to waste.

There exists at present a popular belief among certain classes to the effect that smoke cannot be suppressed. This belief is erroneous. Smoke is nothing, more or less, than small particles of unburned carbon which have escaped complete combustion, due to the lack of a sufficient quantity of oxygen. The hotter the fire and the greater the radiation of heat, the less the amount of smoke ; upon close observation it will invariably be noticed that the hottest possible fires do not smoke, but simply emit heat waves ; this demonstrates a thorough combustion of all carbonaceous matter in fuel. The following extract, taken from the report of the Supervising engineer of Cincinnati, O., gives some interesting facts pertaining to combustion.

COMBUSTION.

"Bituminous coal is composed of carbon, hydrogen, oxygen, nitrogen and ash, the larger part being carbon. When the temperature of carbon and hydrogen is raised to a high point they combine with oxygen, and the result of the union is heat. Since the larger part of fuel is composed of carbon, and contains very little oxygen, it must receive from the atmosphere the necessary amount of oxygen to produce fire. In all combustion, then, care must be taken to admit sufficient air to the furnace to provide the required quantity of oxygen, or graduate the supply of fuel in keeping with the quantity of air naturally in the fire-box. If one or the other is not done, the result is imperfect combustion ; that is to say all the elements of carbon and hydrogen cannot combine and burn, because there is not air (oxygen) enough within the furnace

to make the complete union possible. That is what causes smoke. Smoke consists of watery vapor in large part carrying in it particles of unconsumed dark-colored carbon. Therefore

(a) Smoke results solely from imperfect combustion.

(b) When combustion is thorough smoke is impossible.

(c) Combustion will be thorough and perfect only when the chemically correct quantity of oxygen (air) is supplied to chemically unite with all the atoms of carbon and hydrogen. If an insufficient amount of oxygen (air) is supplied to the furnace, all of the atoms will not be consumed.

(d) No furnace can give air (oxygen) enough to give this complete combustion through its grate bars.

(e) The combustion in an ordinary steam boiler furnace is imperfect because it receives air through the grate bars only. All smoke devices are an attempt to augment the quantity of air delivered to the fire and there can be no success in decreasing smoke in ordinary furnaces unless this is the principle of the device used.

(f) Since sufficient air oxygen) to produce perfect combustion cannot be obtained through the grate bars alone, then it must be introduced to the fireplace at the front or sides of the furnace, or at the bridge-wall, and brought in contact with the burning gases.

As will be seen by this report, all devices for consuming smoke operate on the same principle, viz., to increase the amount of air (oxygen) supplied to the furnace.

There are hundreds of smoke consuming devices in the market at present. Many of these do excellent work, the practical experience of this department is that when properly handled they are capable of reducing the volume of smoke to a minimum.

The following figures indicate the amount and the extent

of the work done by this department since the passage of the smoke ordinance:

Number of inspections made	576
Number of plants having a smoke consuming device in use	131
Number of plants without a smoke consuming device in use	90
Number of orders issued to abate smoke nuisance	221

There has been a general desire evinced on the part of our larger manufacturing establishments to comply with and to assist this department in carrying out the provisions of the smoke ordinance. In many instances smoke preventing devices were introduced without waiting for an official notification from this office.

Considering the enormity of the nuisance, the Health Department is to be congratulated on the good results achieved in so short a time. The enforcement of this ordinance has increased the amount of work thrown upon this department and has added quite materially to the labors of our already overworked sanitary inspectors.

It is of great importance that an additional inspector, designated as Smoke Inspector, be appointed, who shall devote his time exclusively to this branch of the department. This would require the service of a skillful mechanical engineer, a man who is proficient in all matters pertaining to the construction and management of furnaces and boilers as well as the practical application and proper management of so called smoke consumers—one who is in a position to give all needed advice on this subject whenever desired. While much has been accomplished so far in reducing the smoke nuisance in this city, much still remains to be done.

CONCLUSION.

In conclusion permit me to express my sincere thanks to his Honor, the Mayor, the members of the Common Council, and to the medical profession, for their kind cooperation and support given this department during the past year.

To the members of the Health Department, who have been of valuable assistance to me in the discharge of my duties, and who have so willingly and faithfully performed the work assigned to them, I desire to express my thanks and obligations.

The Department is also indebted to the Press and to the Police Department for valuable assistance in its work.

Respectfully submitted,

F. M. SCHULZ, M. D.,
Commissioner of Health.

BUREAU OF VITAL STATISTICS.

F. M. Schulz, M. D., Commissioner of Health:

SIR:—I submit herewith the twenty-second annual report of the Vital Statistics of the city of Milwaukee for the year ending December 31, 1898.

The past year has not been characterized by any unusual amount of the diseases which ordinarily prevail in the city, nor with any epidemic except that of Influenza which made its appearance in December, but which had no material influence upon the death rate for the year.

The total number of deaths occurring in the city was 3338, a decrease of 268 as compared with the previous year. This number represents an annual death rate of 11.92 per 1,000 upon an estimated population of 280,000, and is an exceptionally low rate for any city having over 250,000 population and is the lowest in the history of the city of Milwaukee since 1871, the earliest period at which any reliable data are obtainable.

It is a somewhat remarkable, and at the same time, very satisfactory fact, that each year since 1890 has shown a marked decrease in the annual death rate, and with one exception, an actual decrease in the number of deaths, notwithstanding the constant increase in population. The following table shows, for the year 1891 to 1898 inclusive, the estimated population, number of deaths and annual death rates:

Year.	Population.	Deaths.	Annual Rate.
1891	214,000	4689	21.91
1892	223,000	4516	20.25
1893	232,000	4462	19.23
1894	241,000	4253	17.64
1895	250,000	3885	15.54
1896	260,000	3904	15.00
1897	275,000	3606	13.11
1898	280,000	3338	11.92

The decrease in the number of deaths, as compared with former years, is most noticeable in children under five years of age, as will be seen in the following table:

Years.	Total Deaths	Under One Year.	One to Five Years.	Total Under Five Years.	Per Cent Under Five to Total Deaths.
1892.....	4516	1479	744	2223	49.2
1893.....	4462	1653	664	2317	51.9
1894	4253	1441	650	2091	49.2
1895.....	3885	1339	486	1825	46.9
1896.....	3904	1297	494	1791	45.9
1897.....	3606	1077	425	1502	41.6
1898.....	3338	1010	336	1346	40.3

Of the 3338 deaths reported, 1795 were males and 1543 females, these figures representing 116 males for each 100 females.

By reference to Table No. 17, it will be seen that of the total number of deaths reported 1707, or 51.1 per cent, were born in Milwaukee; 387, or 11.6 per cent, in other portions of the United States, while 1244 or 37.3 per cent of decendents were of foreign birth, and of this number 834, or about 25 per cent of the whole number, were born in Germany.

BIRTHS.

The births recorded in this Department during the year number 7796, representing an annual birth rate of 28.09 per 1000 population. Of this number 4052 or 51.97 per cent were males, and 3744 or 48.03 per cent were females.

MARRIAGES.

During the year 4206 marriages were recorded in the city. Of this number 3125 were solemnized by religious ceremony,

and 1081 by judicial. Of the husbands, the places of residence given were as follows: Milwaukee 2123; Wisconsin, other than Milwaukee 342, while 1741 or 41.4 per cent of the total number were non-residents of this state.

On the following pages will be found, detailed in tabular form, an analysis of the Vital Statistics as recorded during the year.

Respectfully submitted,

J. W. Coon, M. D.,
Registrar of Vital Statistics.

STATISTICAL TABLES.

TABLE No. 1.

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the year, 1898. The Annual Death Rate per 1,000 for the year was 11.92 on an estimated population of 280,000. For the year 1897 there were 3606 deaths, representing an annual Death Rate of 13.11 per 1000 population.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.												
		Male.	Female.	Single.	Married.	Widowed	Milw'kee.	U.S. other than Mil.	Foreign.	Under 1 year.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
TOTAL—All Causes	3338	1795	1543	1838	1139	361	1707	387	1244	1010	336	103	142	261	251	259	257	266	304	128	21	...
General Diseases	883	451	432	419	397	67	381	141	361	91	90	38	76	154	115	100	91	70	49	8	1	...
Typhoid Fever	46	36	10	29	17	...	16	17	13	...	...	2	12	17	11	2	2	...	...	...	...	...
Measles	2	1	1	2	...	...	2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	2	...	2	2	...	...	1	1	...	...	2	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough	53	27	26	53	...	...	51	2	...	35	18	...	...	...	...	...	...	...	...	...	...	...
Diphtheria and Membranous Croup	61	34	27	61	...	...	54	7	...	3	30	21	7	...	...	...	...	...	...	...	...	...
Other Epidemic Diseases	19	12	7	6	11	2	7	3	9	2	2	...	1	1	1	6	2	2	2	...	...	...
Pulmonary Tuberculosis	316	157	159	133	166	17	130	57	129	10	6	2	37	108	61	44	27	9	12	...	...	...
Other Tubercular Diseases	114	55	59	77	31	6	69	16	29	23	22	8	8	17	13	6	9	4	4	...	...	...
Cancer	166	74	92	10	121	35	11	18	137	...	...	2	1	4	9	32	40	44	26	7	1	...
Other General Diseases	104	55	49	46	51	7	40	20	44	18	8	3	10	7	20	10	11	11	5	1	...	...
Local Diseases	2252	1181	1071	1325	649	278	1258	213	781	908	224	51	55	80	102	125	139	182	245	119	19	...
Meningitis	108	53	55	97	11	...	95	5	8	38	37	14	7	5	1	...	5	1	...	...	...	...
Apoplexy	107	59	48	4	65	38	6	14	87	...	2	...	...	1	1	9	12	34	33	15	...	...
Other Diseases of Brain and Membranes	46	27	19	31	11	4	24	8	14	15	10	...	1	3	2	...	3	5	4	2	1	...
Paralysis	13	4	9	...	8	5	...	4	9	...	...	...	...	...	...	...	1	1	7	3	1	...
Convulsions	127	65	62	127	...	...	127	...	...	116	11	...	...	...	...	...	...	...	...	...	...	...
Other Nervous Diseases	18	9	9	6	11	1	3	3	12	1	...	...	1	1	3	4	...	3	4	1	...	...

Local Diseases—Continued.																						
Organic Heart Diseases	190	79	111	40	108	42	34	23	133	8	...	2	12	9	15	28	31	35	35	12	3	...
Other Diseases of Circulatory System	34	20	14	6	22	6	2	5	27	1	...	1	1	...	3	2	7	4	11	4	...	...
Bronchitis	182	95	87	124	27	31	117	6	59	83	33	3	...	3	1	3	4	12	26	14	...	...
Pneumonia	227	133	94	128	77	22	112	26	89	50	46	8	8	8	18	18	20	22	22	6	1	...
Broncho-pneumonia	51	26	25	39	7	5	37	4	10	22	14	2	1	1	...	...	1	2	4	4	...	...
Asthma	15	9	6	1	7	7	1	1	13	...	...	...	...	1	...	...	4	5	4	1	...	...
Pleurisy	11	3	8	4	5	2	4	2	5	...	1	1	1	2	...	...	3	...	2	1	...	...
Other Respiratory Diseases	25	15	10	17	7	1	13	5	7	6	2	4	4	1	...	2	3	...	2	...	1	...
Gastritis	55	30	25	38	12	5	37	5	13	29	6	...	2	2	2	1	1	3	6	3	...	...
Diarrhœal Diseases	350	194	156	332	15	3	323	11	16	280	49	3	...	...	3	2	4	4	4	1	...	...
Appendicitis and Peritonitis	53	17	36	26	25	2	19	17	17	4	...	6	8	15	7	5	5	...	3	...	...	...
Hernia and Intest. Obstruction	34	17	17	9	14	11	7	3	24	6	...	1	...	2	3	2	4	6	5	4	1	...
Cirrhosis of Liver	21	13	8	4	16	1	3	2	16	...	...	...	...	...	5	7	7	2	...	...	...	...
Other Digestive Diseases	87	47	40	47	32	8	49	7	31	36	6	2	3	1	4	10	7	6	12	..	...	...
Nephritis	106	66	40	25	59	22	19	19	68	8	2	3	4	2	9	18	12	23	20	5	...	...
Other Urinary Diseases	26	22	4	2	15	9	2	9	15	1	...	...	1	...	1	6	1	3	7	4	2	...
Diseases of Female Generative System	12	...	12	1	10	1	1	7	4	...	...	...	...	2	4	2	3	1	...	...	...	...
Puerperal Septicæmia	28	...	28	1	27	...	9	7	12	...	...	...	...	13	12	3	...	...	...	...	...	...
Other Diseases of Pregnancy	16	...	16	...	16	...	4	2	10	...	...	...	...	8	7	1	...	...	...	...	...	...
Diseases of Skin and Cellular Tissue	29	16	13	19	8	2	18	2	9	13	3	1	1	...	1	2	...	4	4	...	...	...
Locomotor System	2	2	...	1	...	1	1	...	1	1	...	. .	...	...	...	...	...	...	1	...	...	...
Malformations	1	1	...	1	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Congenital Debility	194	116	78	194	...	...	190	4	...	189	5	...	...	...	...	...	...	...	...	...	...	...
Senile Debility	84	43	41	1	34	49	...	11	73	...	...	...	...	...	...	...	1	6	29	39	9	...
Other Causes and Ill-Defined	22	12	10	18	3	1	16	4	2	8	7	1	...	2	...	1	...	1	1	1	...	...
Violence	181	151	30	76	90	15	52	30	99	3	12	13	11	25	34	33	27	13	9	...	1	...
Suicides	62	51	11	19	37	6	11	13	38	...	...	...	1	12	14	13	10	6	6	...	...	...
Accidents	116	98	18	57	50	9	41	16	59	3	12	13	10	12	20	18	17	7	3	...	1	...
Homicides	3	2	1	...	3	...	...	1	2	...	...	...	...	1	...	2	...	...	..	...	...	...

TABLE No. 2.

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of January, 1898.

The Annual Death Rate per 1,000 for the month was 12.39 on an estimated population of 275,000.

During the month there were 84 deaths less than for the corresponding month of 1897.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.												
		Male.	Female.	Single.	Married.	Widowed	Milw'kee.	U.S. other than Mil.	Foreign.	Under 1 year.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
TOTAL—All Causes	284	145	139	156	101	27	149	38	97	86	26	13	11	21	23	23	15	26	24	13	3	...
General Diseases	68	39	29	30	32	6	29	12	27	5	4	5	5	12	9	10	6	7	4	...	1	...
Typhoid Fever	6	6	...	4	2	...	4	1	1	...	...	1	1	2	2	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough	3	2	1	3	...	...	3	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria and Membranous Croup	8	3	5	8	...	...	8	...	...	...	4	4	...	...	...	...	...	...	...	...	...	...
Other Epidemic Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pulmonary Tuberculosis	20	11	9	7	13	...	9	5	6	1	...	...	2	7	3	4	1	1	1	...	...	...
Other Tubercular Diseases	8	3	5	6	2	...	3	4	1	...	...	...	1	3	2	2	...	...	...	...	...	...
Cancer	15	7	8	...	10	5	...	1	14	...	...	...	...	...	1	3	2	6	2	...	1	...
Other General Diseases	8	7	1	2	5	1	2	1	5	1	...	...	1	...	1	1	3	...	1	...	...	...
Local Diseases	205	97	108	125	63	17	120	23	62	81	22	8	6	8	8	12	8	17	20	13	2	...
Meningitis	8	4	4	8	...	...	8	...	...	3	4	...	1	...	...	...	...	...	...	...	...	...
Apoplexy	11	7	4	...	7	4	...	1	10	...	...	...	...	...	...	1	...	5	4	1	...	...
Other Diseases of Brain and Membranes	2	...	2	2	...	...	1	1	...	...	1	...	..	...	...	...	...	1	...	...	...	...
Paralysis	2	2	...	...	2	...	...	1	1	...	...	...	...	...	...	...	...	...	1	1	.	...
Convulsions	20	6	14	20	...	..	20	...	...	18	2	..	...	...	...	...	...	...	...	...	...	...
Other Nervous Diseases	2	...	2	...	2	...	...	1	1	...	...	...	...	...	1	...	...	...	...	1	...	...

Local Diseases—Continued.																						
Organic Heart Diseases	14	8	6	3	11	...	2	4	8	1	...	...	...	1	...	4	...	2	2	2	2	...
Other Diseases of Circulatory System	5	1	4	...	4	1	...	1	4	...	...	...	...	...	...	...	1	1	...	3	...	...
Bronchitis	26	11	15	23	1	2	23	1	2	21	1	1	...	...	...	1	...	...	1	1	...	...
Pneumonia	39	23	16	28	8	3	22	5	12	13	7	2	2	2	2	1	3	2	5	...	...	...
Broncho-pneumonia	7	3	4	7	...	...	7	...	...	5	1	1	...	...	...	...	...	...	...	...	...	...
Asthma	1	...	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...
Pleurisy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Respiratory Diseases	4	2	2	2	2	...	2	...	2	...	...	2	...	...	...	1	1	...	...	...	...	...
Gastritis	4	1	3	3	1	...	3	...	1	3	...	...	...	...	...	...	...	1	...	...	...	...
Diarrhœal Diseases	3	1	2	3	...	...	3	...	...	2	1	...	...	...	...	...	...	...	...	...	...	...
Appendicitis and Peritonitis	3	2	1	3	...	...	3	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...
Hernia and Intest. Obstruction	5	1	4	...	3	2	...	2	3	...	...	...	...	...	2	...	1	1	1	...	...	...
Cirrhosis of Liver	1	1	...	...	1	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...
Other Digestive Diseases	12	7	5	9	2	1	9	...	3	5	3	1	...	...	...	1	...	...	2	...	...	...
Nephritis	7	3	4	2	5	...	2	2	3	1	...	1	...	...	...	2	1	1	1	...	...	...
Other Urinary Diseases	3	3	...	1	1	1	...	1	2	1	...	...	...	...	...	...	...	...	1	1	...	...
Diseases of Female Generative System	1	...	1	...	1	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...
Puerperal Septicæmia	4	...	4	...	4	...	2	...	2	...	...	...	...	1	3	...	...	...	...	...	...	...
Other Diseases of Pregnancy	3	...	3	...	3	...	2	1	...	...	...	...	...	3	...	...	...	...	...	...	...	...
Diseases of Skin and Cellular Tissue	2	2	...	...	2	...	...	...	2	...	...	...	...	...	...	...	...	2	...	...	...	...
Locomotor System	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Malformations	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Congenital Debility	8	4	4	8	...	...	8	...	...	8	...	...	...	...	...	...	...	...	...	...	...	...
Senile Debility	5	4	1	...	2	3	...	1	4	...	...	...	...	...	...	...	...	...	2	3	...	...
Other Causes and Ill-Defined	3	1	2	3	...	...	3	...	...	...	2	...	...	1	...	...	...	...	...	...	...	...
Violence	11	9	2	1	6	4	...	3	8	...	...	...	...	1	6	1	1	2	...	...	...	...
Suicides	2	1	1	1	1	...	...	2	...	...	...	...	...	1	1	...	...	...	...	...	...	...
Accidents	9	8	1	...	5	4	...	1	8	...	...	...	...	...	5	1	1	2	...	...	...	...
Homicides	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE No. 3.

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of February, 1898.

The Annual Death Rate per 1,000 for the month was 9.60 on an estimated population of 275,000.

During the month there were 119 deaths less than for the corresponding month of 1897.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.												
		Male.	Female.	Single.	Married.	Widowed	Milw'kee.	U.S. other than Mil	Foreign.	Under 1 year.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
TOTAL—All Causes	220	113	107	116	82	22	104	28	88	65	14	12	10	13	19	15	20	17	24	9	2	...
General Diseases	56	28	28	31	19	6	27	7	22	6	5	6	8	7	3	6	6	5	3	1	...	...
Typhoid Fever	1	1	...	...	1	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough	5	3	2	5	...	...	5	...	...	3	2	...	...	...	...	...	...	...	...	...	...	...
Diphtheria and Membranous Croup	7	3	4	7	...	...	5	2	...	1	...	3	3	...	...	...	...	...	...	...	...	...
Other Epidemic Diseases	1	1	...	1	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Pulmonary Tuberculosis	18	8	10	9	9	...	9	1	8	...	...	...	4	7	2	4	1	...	...	...	...	...
Other Tubercular Diseases	7	4	3	5	2	...	3	2	2	...	2	1	1	...	1	...	2	...	...	...	...	...
Cancer	10	3	7	1	5	4	1	1	8	...	...	1	...	...	...	1	2	4	1	1	...	...
Other General Diseases	7	5	2	3	2	2	3	1	3	2	...	1	...	...	...	1	...	1	2	...	...	...
Local Diseases	163	84	79	84	63	16	76	21	66	58	9	6	2	6	16	9	14	12	21	8	2	...
Meningitis	8	3	5	6	2	...	5	2	1	5	1	...	...	...	1	...	...	1	...	...	...	...
Apoplexy	9	5	4	...	6	3	1	...	8	...	...	...	...	...	...	1	...	3	4	1	...	...
Other Diseases of Brain and Membranes	3	3	...	2	...	1	2	1	...	1	1	...	...	...	...	...	...	1	...	...	...	...
Paralysis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...
Convulsions	12	6	6	12	...	...	12	...	...	11	1	...	...	...	...	...	...	...	...	...	...	...
Other Nervous Diseases	2	...	2	1	1	...	...	...	2	...	...	...	...	...	1	...	...	...	1	...	...	...

Local Diseases—Continued.																						
Organic Heart Diseases	8	5	3	3	3	2	1	2	5	...	...	1	...	1	2	...	2	...	2	...	...	...
Other Diseases of Circulatory System	3	2	1	...	3	...	...	...	3	...	...	...	...	...	1	...	1	...	1	...	...	...
Bronchitis	21	11	10	16	3	2	16	1	4	14	2	...	...	...	1	...	...	...	3	1	...	...
Pneumonia	16	11	5	10	5	1	10	2	4	6	2	2	...	...	2	1	2	1	...	...	...	...
Broncho-pneumonia	10	4	6	7	2	1	7	1	2	4	2	1	...	...	...	...	1	1	...	1	...	...
Asthma	1	1	...	...	...	1	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...
Pleurisy	1	...	1	1	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Other Respiratory Diseases	2	1	1	...	2	...	...	1	1	...	...	...	...	...	...	1	1	...	...	...	...	...
Gastritis	1	...	1	1	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Diarrhœal Diseases	6	4	2	6	...	...	6	...	...	6	...	...	...	...	...	...	...	...	...	...	...	...
Appendicitis and Peritonitis	7	3	4	3	4	...	2	4	1	...	...	1	...	3	1	1	1	...	...	...	...	...
Hernia and Intest. Obstruction	3	1	2	1	1	1	1	...	2	1	...	...	...	...	...	1	...	...	...	...	1	...
Cirrhosis of Liver	5	4	1	2	3	...	...	1	4	...	...	...	...	...	2	...	3	...	...	...	...	...
Other Digestive Diseases	4	2	2	1	2	1	1	...	3	1	...	...	...	...	1	...	...	1	1	...	...	...
Nephritis	12	7	5	3	7	2	1	...	11	...	...	1	...	...	1	3	1	1	4	1	...	...
Other Urinary Diseases	3	2	1	...	3	...	...	2	1	...	...	...	...	...	...	...	1	1	1	...	...	...
Diseases of Female Generative System	1	...	1	...	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...
Puerperal Septicæmia	3	...	3	...	3	...	...	3	...	...	...	...	...	2	1	...	...	...	...	...	...	...
Other Diseases of Pregnancy	2	...	2	...	2	...	...	...	2	...	...	...	...	...	1	1	...	...	...	...	...	...
Diseases of Skin and Cellular Tissue	1	...	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...
Locomotor System	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Malformations	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Congenital Debility	9	5	4	9	...	...	9	...	...	9	...	...	...	...	...	...	...	...	...	...	...	...
Senile Debility	9	4	5	...	8	1	...	1	8	...	...	...	...	...	...	...	...	1	4	3	1	...
Other Causes and Ill-Defined	1	...	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...
Violence	1	1	...	1	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Suicides	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Accidents	1	1	...	1	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Homicides	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE No. 4.

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of March, 1898.

The Annual Death Rate per 1,000 for the month was 11.82 on an estimated population of 275,000.

During the month there were 64 deaths less than for the corresponding month of 1897.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.												
		Male.	Female.	Single.	Married.	Widowed	Milw'kee.	U.S. other than Mil.	Foreign.	Under 1 year.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
TOTAL—All Causes	271	150	121	137	103	31	131	30	110	68	31	7	10	19	17	30	28	27	22	12	...	...
General Diseases	95	51	44	44	45	6	43	15	37	13	10	4	7	14	9	11	11	9	6	1	...	...
Typhoid Fever	1	...	1	...	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough	5	1	4	5	...	...	5	...	...	5	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria and Membranous Croup	4	1	3	4	...	...	4	...	...	...	2	2	...	...	...	...	...	...	...	...	...	...
Other Epidemic Diseases	6	2	4	1	4	1	1	3	2	...	...	...	1	...	...	1	2	1	1	...	...	...
Pulmonary Tuberculosis	37	24	13	16	18	3	19	6	12	5	...	...	4	14	6	3	3	...	2	...	...	...
Other Tubercular Diseases	13	5	8	12	1	...	12	...	1	3	7	2	...	...	...	1	...	...	...	...	...	...
Cancer	19	11	8	2	15	2	...	3	16	...	...	...	...	...	...	3	5	7	3	1	...	...
Other General Diseases	10	7	3	4	6	...	2	3	5	...	1	...	2	...	2	3	1	1	...	...	...	...
Local Diseases	167	90	77	90	53	24	86	15	66	55	19	3	3	5	7	17	14	17	16	11	...	...
Meningitis	10	6	4	10	...	...	10	...	...	4	5	1	...	...	...	...	...	...	...	...	...	...
Apoplexy	8	5	3	...	7	1	1	3	4	...	...	...	...	...	...	2	...	3	3	...	...	...
Other Diseases of Brain and Membranes	2	1	1	1	1	...	1	...	1	1	...	...	...	...	...	...	1	...	...	...	...	...
Paralysis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Convulsions	10	8	2	10	...	...	10	...	...	8	2	...	...	...	...	...	...	...	...	...	...	...
Other Nervous Diseases	3	...	3	1	1	1	...	...	3	...	...	...	...	...	...	1	...	1	1	...	...	...

Local Diseases—Continued.																					
Organic Heart Diseases	19	6	13	5	10	4	4	4	11	...	...	1	2	1	1	5	2	4	3	...	...
Other Diseases of Circulatory System	6	5	1	3	2	1	2	...	4	1	...	1	...	...	...	2	1	...	1	...	...
Bronchitis	16	6	10	11	2	3	11	...	5	7	4	...	...	...	...	...	1	2	2	...	...
Pneumonia	30	20	10	16	13	1	15	2	13	7	5	...	1	2	2	3	5	4	1	...	...
Broncho-pneumonia	5	2	3	3	...	2	3	...	2	2	1	...	...	...	...	...	...	...	...	2	...
Asthma	2	1	1	...	2	...	...	...	2	...	...	...	...	...	...	...	1	...	1	...	...
Pleurisy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Respiratory Diseases	1	1	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...
Gastritis	2	2	...	2	...	...	2	...	...	1	1	...	...	...	...	...	...	...	...	...	...
Diarrhœal Diseases	8	5	3	8	...	...	8	...	...	7	1	...	...	...	...	...	...	...	...	...	...
Appendicitis and Peritonitis	4	...	4	1	3	...	2	1	1	1	...	...	...	2	...	...	1	...	...	...	...
Hernia and Intest. Obstruction	2	2	...	...	2	...	...	...	2	...	...	...	...	...	...	1	...	...	...	1	...
Cirrhosis of Liver	2	2	...	1	1	...	2	...	...	...	...	...	...	...	1	1	...	...	...	...	...
Other Digestive Diseases	3	2	1	3	...	...	3	...	...	3	...	...	...	...	...	...	...	...	...	...	...
Nephritis	8	5	3	2	3	3	1	1	6	1	...	...	...	...	...	1	2	2	1	1	...
Other Urinary Diseases	2	2	...	...	1	1	...	1	1	...	...	...	...	...	...	...	...	1	...	1	...
Diseases of Female Generative System	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Septicæmia	2	...	2	...	2	...	...	1	1	...	...	...	...	...	1	1	...	...	...	...	...
Other Diseases of Pregnancy	1	...	1	...	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...
Diseases of Skin and Cellular Tissue	1	...	1	1	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...
Locomotor System	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Malformations	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Congenital Debility	12	6	6	12	...	...	11	1	...	12	...	...	...	...	...	...	...	...	...	...	...
Senile Debility	8	3	5	...	1	7	...	...	8	...	...	...	...	...	...	...	...	...	2	6	...
Other Causes and Ill-Defined	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Violence	9	9	...	3	5	1	2	..	7	...	2	...	...	...	1	2	3	1	...	...	...
Suicides	4	4	...	1	2	1	...	...	4	...	...	...	...	...	1	...	3	...	...	...	...
Accidents	5	5	...	2	3	...	2	...	3	..	2	...	...	...	...	2	...	1	...	...	...
Homicides	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE No 5.

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of April, 1898.

The Annual Death Rate per 1,000 for the month was 11.91 on an estimated population of 275,000.

During the month there were 16 deaths less than for the corresponding month of 1897.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.											
		Male.	Female.	Single.	Married.	Widowed	Milw'kee.	U.S. other than Mil	Foreign.	Under 1 year.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
TOTAL—All Causes	273	152	121	138	95	40	127	32	114	73	30	5	10	21	20	26	18	19	35	13	3	...
General Diseases	52	23	29	23	23	6	21	6	25	2	7	1	7	12	4	9	5	1	3	1	...	...
Typhoid Fever	2	...	2	2	...	...	2	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	1	...	1	1	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria and Membranous Croup	3	2	1	3	...	...	3	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...
Other Epidemic Diseases	1	1	...	...	1	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Pulmonary Tuberculosis	27	14	13	9	15	3	5	4	18	...	...	...	3	11	3	5	3	1	1	...	...	...
Other Tubercular Diseases	5	1	4	4	1	...	4	...	1	...	2	1	1	...	...	1	...	...	...	...	...	...
Cancer	7	2	5	...	4	3	1	1	5	...	...	...	...	...	1	2	2	...	2	...	...	...
Other General Diseases	6	3	3	4	2	...	4	1	1	2	1	...	1	1	...	...	...	...	...	1	...	...
Local Diseases	203	114	89	103	62	33	101	23	79	71	21	3	3	4	14	14	11	17	31	12	2	...
Meningitis	11	6	5	11	...	...	11	...	...	4	5	2	...	...	...	...	...	...	...	...	...	...
Apoplexy	12	7	5	1	3	8	...	1	11	...	...	...	...	...	...	...	...	4	5	3	...	...
Other Diseases of Brain and Membranes	3	...	3	1	2	...	...	1	2	...	...	...	...	...	2	...	...	...	1	...	...	...
Paralysis	4	1	3	...	2	2	...	1	3	...	...	...	...	...	...	...	...	...	3	1	...	...
Convulsions	11	6	5	11	...	...	11	...	...	11	...	...	...	...	...	...	...	...	...	...	...	...
Other Nervous Diseases	2	2	...	1	1	...	1	1	...	1	...	...	...	...	...	...	...	...	1	...	...	...

Local Diseases—Continued.																						
Organic Heart Diseases	14	6	8	4	8	2	2	4	8	...	...	...	1	...	2	5	2	2	2	...	...	...
Other Diseases of Circulatory System	2	1	1	...	1	1	...	1	1	...	...	...	...	...	...	...	...	1	1	...	...	...
Bronchitis	28	17	11	19	3	6	16	1	11	11	5	...	.	1	...	...	...	2	6	3	...	...
Pneumonia	32	20	12	15	16	1	14	3	15	6	7	...	1	...	6	3	3	1	3	2	...	...
Broncho-pneumonia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Asthma	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pleurisy	1	...	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...
Other Respiratory Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gastritis	8	6	2	3	4	1	3	...	5	2	1	...	...	...	...	...	...	1	3	1	...	...
Diarrhœal Diseases	16	8	8	16	...	...	16	...	...	16	...	...	...	...	...	...	...	...	...	...	...	...
Appendicitis and Peritonitis	6	1	5	3	2	1	3	2	1	1	...	1	1	...	1	1	1	...	...	...	...	...
Hernia and Intest. Obstruction	1	1	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...
Cirrhosis of Liver	3	2	1	...	2	1	...	1	2	...	...	...	...	...	...	1	2	...	...	...	...	...
Other Digestive Diseases	4	4	...	...	3	1	...	1	3	...	...	...	...	...	...	1	1	1	1	...	...	...
Nephritis	9	5	4	2	3	4	2	2	5	2	...	...	...	...	...	1	2	4	...	...	...	...
Other Urinary Diseases	4	4	...	...	3	1	...	3	1	...	...	...	...	...	1	1	...	...	1	...	1	...
Diseases of Female Generative System	1	...	1	1	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Puerperal Septicæmia	3	..	3	...	3	..	2	...	1	...	...	...	...	2	1	...	...	...	...	...	...	...
Other Diseases of Pregnancy	2	...	2	...	2	...	...	...	2	...	...	...	...	1	1	...	...	...	...	...	...	...
Diseases of Skin and Cellular Tissue	3	2	1	2	...	1	2	...	1	2	...	...	...	...	...	...	...	...	1	...	...	...
Locomotor System	1	1	...	1	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Malformations	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Congenital Debility	14	10	4	14	...	...	14	...	...	14	...	...	...	...	...	...	...	...	...	...	...	...
Senile Debility	5	2	3	...	2	3	...	...	5	...	...	...	...	...	...	...	...	...	2	2	1	...
Other Causes and Ill-Defined	3	2	1	3	...	...	3	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...
Violence	18	15	3	7	10	1	5	3	10	...	2	1	...	5	2	3	2	1	1	...	1	...
Suicides	5	5	...	1	4	...	...	...	5	...	...	...	...	...	1	1	1	1	1	...	...	...
Accidents	11	9	2	6	4	1	5	2	4	..	2	1	...	4	1	1	1	...	...	...	1	...
Homicides	2	1	1	..	2	...	...	1	1	...	...	...	...	1	...	1	...	...	...	...	...	...

TABLE No. 6.

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of May, 1898.

The Annual Death Rate per 1,000 for the month was 11.43 on an estimated population of 275,000.

During the month there were 28 deaths less than for the corresponding month of 1897.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.											
		Male.	Female.	Single.	Married.	Widowed	Milw'kee.	U.S. other than Mil.	Foreign.	Under 1 year.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
TOTAL—All Causes	262	149	113	124	102	36	112	28	122	58	24	5	14	23	23	23	27	27	26	10	2	...
General Diseases	86	42	44	32	44	10	29	9	48	5	9	2	3	11	16	12	12	10	6	...	...	...
Typhoid Fever	6	3	3	3	3	...	...	1	5	...	...	...	2	3	...	...	1	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough	4	3	1	4	...	...	4	...	...	1	3	...	...	...	...	...	...	...	...	...	...	...
Diphtheria and Membranous Croup	1	1	...	1	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Other Epidemic Diseases	4	3	1	...	4	...	...	...	4	...	...	...	...	...	...	3	...	1	...	...	...	...
Pulmonary Tuberculosis	31	15	16	11	16	4	14	3	14	1	1	...	1	7	8	6	3	1	3	...	...	...
Other Tubercular Diseases	13	8	5	8	4	1	5	3	5	1	3	1	...	1	3	...	3	1	...	...	...	...
Cancer	18	7	11	2	12	4	2	2	14	...	...	1	...	...	2	2	4	6	3	...	...	...
Other General Diseases	9	2	7	3	5	1	3	...	6	2	1	...	...	...	3	1	1	1	...	...	...	...
Local Diseases	163	96	67	86	54	23	79	16	68	53	15	2	9	10	5	9	13	15	20	10	2	...
Meningitis	8	7	1	7	1	...	7	...	1	4	2	...	1	...	...	...	1	...	...	...	...	...
Apoplexy	5	4	1	...	5	...	...	1	4	...	...	...	...	...	...	...	1	1	2	1	...	...
Other Diseases of Brain and Membranes	7	4	3	6	1	...	5	...	2	3	2	...	...	1	...	...	1	...	...	...	...	...
Paralysis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Convulsions	11	7	4	11	...	...	11	...	...	9	2	...	...	...	...	...	...	...	...	...	...	...
Other Nervous Diseases	1	1	...	1	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...

Local Diseases—Continued.																						
Organic Heart Diseases	13	5	8	1	6	6	1	...	12	1	...	...	...	...	...	1	3	5	1	1	1	...
Other Diseases of Circulatory System	3	...	3	...	3	...	...	1	2	...	...	...	...	...	...	...	1	...	2	...	...	...
Bronchitis	14	7	7	8	3	3	6	1	7	6	1	...	...	1	...	...	2	1	2	1	...	...
Pneumonia	24	16	8	14	8	2	14	1	9	4	5	1	2	2	1	1	...	3	4	1	...	...
Broncho-pneumonia	4	3	1	3	1	...	3	...	1	1	2	...	...	...	...	...	...	...	1	...	...	...
Asthma	1	1	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...
Pleurisy	2	...	2	1	1	...	1	1	...	...	1	...	...	...	...	...	1	...	...	...	...	...
Other Respiratory Diseases	3	2	1	3	...	...	1	2	...	1	...	...	2	...	...	...	...	...	...	...	...	...
Gastritis	6	5	1	3	3	...	3	2	1	2	...	...	1	...	2	...	1	...	...	...	...	...
Diarrhœal Diseases	8	5	3	8	...	...	8	...	...	8	...	...	...	...	...	...	...	...	...	...	...	...
Appendicitis and Peritonitis	7	4	3	4	3	...	3	1	3	1	...	1	1	2	...	1	1	...	...	...	...	...
Hernia and Intest. Obstruction	3	2	1	1	1	1	...	...	3	...	...	...	...	1	...	...	...	1	...	1	...	...
Cirrhosis of Liver	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Digestive Diseases	2	...	2	...	2	...	1	...	1	...	...	...	...	...	...	1	1	...	...	...	...	...
Nephritis	13	8	5	3	8	2	2	1	10	1	...	...	2	...	...	3	...	1	5	1	...	...
Other Urinary Diseases	3	3	...	...	2	1	...	...	3	...	...	...	...	...	...	1	...	...	1	...	1	...
Diseases of Female Generative System	1	...	1	...	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...
Puerperal Septicæmia	3	...	3	...	3	...	1	1	1	...	...	...	...	2	1	...	...	...	...	...	...	...
Other Diseases of Pregnancy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diseases of Skin and Cellular Tissue	4	2	2	4	...	...	4	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...
Locomotor System	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Malformations	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Congenital Debility	8	7	1	8	...	...	8	...	...	8	...	...	...	...	...	...	...	...	...	...	...	...
Senile Debility	7	3	4	...	1	6	...	2	5	...	...	...	...	...	...	...	...	1	2	4	...	...
Other Causes and Ill-Defined	2	...	2	...	1	1	...	2	...	...	...	...	...	1	...	...	...	1	...	...	...	...
Violence	13	11	2	6	4	3	4	3	6	...	...	1	2	2	2	2	2	2	...	...	...	...
Suicides	8	7	1	3	3	2	1	3	4	...	...	...	...	2	2	2	1	1	...	...	...	...
Accidents	5	4	1	3	1	1	3	...	2	...	...	1	2	...	...	...	1	1	...	...	...	...
Homicides	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE No. 7.

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of June, 1898.

The Annual Death Rate per 1,000 for the month was 10.69 on an estimated population of 275,000.

During the month there were the same number of deaths as for the corresponding month of 1897.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.												
		Male.	Female.	Single.	Married.	Widowed	Milw'kee.	U.S. other than Mil.	Foreign.	Under 1 year.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
TOTAL—All Causes	245	136	109	123	102	20	113	29	103	57	26	10	9	25	19	19	20	22	31	7	...	...
General Diseases	71	35	36	29	38	4	23	12	36	10	3	2	4	13	10	6	6	8	8	1	...	...
Typhoid Fever	3	3	...	2	1	...	2	...	1	...	...	...	1	1	1	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough	3	...	3	3	...	...	3	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria and Membranous Croup	1	...	1	1	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Other Epidemic Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pulmonary Tuberculosis	29	13	16	11	17	1	10	5	14	1	1	...	3	8	8	2	3	...	3	...	...	...
Other Tubercular Diseases	9	5	4	7	2	...	6	1	2	4	...	1	...	3	...	...	1	...	...	...	...	...
Cancer	16	9	7	...	14	2	...	2	14	...	...	...	...	...	...	3	2	6	4	1	...	...
Other General Diseases	10	5	5	5	4	1	2	3	5	2	1	1	...	1	1	1	...	2	1	...	...	...
Local Diseases	157	85	72	86	57	14	81	17	59	47	22	5	4	12	6	9	11	14	21	6	...	...
Meningitis	14	6	8	12	2	...	12	1	1	2	6	3	...	2	...	...	1	...	...	...	...	...
Apoplexy	7	3	4	...	5	2	...	2	5	...	...	...	...	...	...	1	...	3	2	1	...	...
Other Diseases of Brain and Membranes	2	2	...	2	...	...	2	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...
Paralysis	2	...	2	...	1	1	...	1	1	...	...	...	...	...	...	...	1	...	1	...	...	...
Convulsions	9	7	2	9	...	...	9	...	...	9	...	...	...	...	...	...	...	...	...	...	...	...
Other Nervous Diseases	6	4	2	...	6	...	...	1	5	...	...	...	...	...	1	2	...	2	1	...	...	...

Local Diseases—Continued.																						
Organic Heart Diseases	15	8	7	5	7	3	5	...	10	1	...	...	2	3	1	...	2	2	3	1	...	...
Other Diseases of Circulatory System	5	4	1	1	4	...	...	...	5	...	...	...	...	...	1	...	...	2	2	...	...	...
Bronchitis	16	6	10	13	2	1	13	...	3	7	6	...	...	...	...	...	...	2	...	...	...	...
Pneumonia	9	4	5	4	4	1	3	1	5	1	2	1	...	...	...	1	1	1	2	...	...	...
Broncho-pneumonia	1	...	1	1	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Asthma	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pleurisy	2	1	1	...	2	...	...	...	2	...	...	...	...	...	...	...	2	...	...	...	...	...
Other Respiratory Diseases	3	2	1	2	1	...	1	...	2	...	...	...	1	...	...	...	1	...	1	...	...	...
Gastritis	5	3	2	4	1	...	4	1	...	4	...	...	...	1	...	...	...	...	...	...	...	...
Diarrhœal Diseases	10	5	5	8	2	...	7	1	2	6	2	...	...	...	...	...	1	1	...	...	...	...
Appendicitis and Peritonitis	4	1	3	2	2	...	1	1	2	...	...	...	1	2	...	...	...	...	1	...	...	...
Hernia and Intest. Obstruction	4	2	2	3	...	1	3	...	1	1	...	1	...	1	...	...	1	...	...	...	...	...
Cirrhosis of Liver	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Digestive Diseases	5	3	2	...	3	2	1	1	3	...	...	...	...	1	...	1	1	1	1	...	...	...
Nephritis	12	7	5	3	7	2	3	4	5	1	1	...	...	...	3	3	...	...	3	1	...	...
Other Urinary Diseases	1	1	...	...	1	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...
Diseases of Female Generative System	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Septicæmia	1	...	1	...	1	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...
Other Diseases of Pregnancy	1	...	1	...	1	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...
Diseases of Skin and Cellular Tissue	3	2	1	2	1	...	2	...	1	1	1	...	...	...	...	...	...	...	1	...	...	...
Locomotor System	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Malformations	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Congenital Debility	6	5	1	6	...	...	6	...	...	6	...	...	...	...	...	...	...	...	...	...	...	...
Senile Debility	5	3	2	...	4	1	...	...	5	...	...	...	...	...	...	...	...	...	2	3	...	...
Other Causes and Ill-Defined	9	6	3	9	...	...	8	1	...	7	2	...	...	...	...	...	...	...	...	...	...	...
Violence	17	16	1	8	7	2	9	...	8	...	1	3	1	...	3	4	3	...	2	...	...	...
Suicides	7	7	...	2	3	2	4	...	3	...	...	...	...	...	2	2	1	...	2	...	...	...
Accidents	10	9	1	6	4	...	5	...	5	...	1	3	1	...	1	2	2	...	...	...	...	...
Homicides	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE No. 8.

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of July, 1898.

The Annual Death Rate per 1,000 for the month was 10.64 on an estimated population of 280,000.

During the month there were 25 deaths less than for the corresponding month of 1897.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.											
		Male.	Female.	Single.	Married.	Widowed	Milw'kee.	U.S. other than Mil.	Foreign.	Under 1 year.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
TOTAL—All Causes	248	136	112	127	97	24	123	27	98	66	22	7	13	24	20	24	19	19	25	7	2	...
General Diseases	77	40	37	32	39	6	32	14	31	10	2	2	7	14	12	11	7	6	6	...	...	...
Typhoid Fever	7	6	1	3	4	...	2	4	1	...	...	...	1	3	1	2	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough	5	4	1	5	...	...	5	...	...	4	1	...	...	...	...	...	...	...	...	...	...	...
Diphtheria and Membranous Croup	3	2	1	3	...	...	2	1	...	1	...	2	...	...	...	...	...	...	...	...	...	...
Other Epidemic Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pulmonary Tuberculosis	25	13	12	13	11	1	14	3	8	...	1	...	4	9	7	2	1	...	1	...	...	...
Other Tubercular Diseases	11	3	8	4	7	...	5	1	5	2	...	...	2	1	1	2	1	...	2	...	...	...
Cancer	16	9	7	...	12	4	1	3	12	...	...	...	...	1	1	3	4	4	3	...	...	...
Other General Diseases	10	3	7	4	5	1	3	2	5	3	...	...	...	...	2	2	1	2	...	...	...	...
Local Diseases	150	78	72	82	50	18	80	12	58	55	16	2	4	7	6	9	11	12	19	7	2	...
Meningitis	9	4	5	6	3	...	6	1	2	1	3	1	1	1	...	...	2	...	...	...	...	...
Apoplexy	7	...	7	...	4	3	...	...	7	...	...	...	...	...	...	...	2	2	2	1	...	...
Other Diseases of Brain and Membranes	5	3	2	5	...	...	4	1	...	3	1	...	...	1	...	...	...	...	...	...	...	...
Paralysis	1	...	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...
Convulsions	7	2	5	7	...	...	7	...	...	7	...	...	...	...	...	...	...	...	...	...	...	...
Other Nervous Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

Local Diseases—Continued.																					
Organic Heart Diseases	14	3	11	3	9	2	2	1	11	1				1	1	3	3	2	3		
Other Diseases of Circulatory System	1	1			1				1										1		
Bronchitis	8	6	2	5	2	1	5		3	2	3					1			1	1	
Pneumonia	10	5	5	4	4	2	4	1	5	1	3					2	1		2	1	
Broncho-pneumonia	1		1	1			1				1										
Asthma	3	2	1		2	1			3									2	1		
Pleurisy																					
Other Respiratory Diseases	1		1	1			1				1										
Gastritis	1	1			1			1											1		
Diarrhœal Diseases	34	24	10	30	3	1	30		4	27	3				1	1		1		1	
Appendicitis and Peritonitis	3	1	2	2	1		1	2					1	2							
Hernia and Intest. Obstruction	2	2			2				2								1	1			
Cirrhosis of Liver	3		3		3				3						1	1		1			
Other Digestive Diseases	6	5	1	4	2		4		2	3			1						2		
Nephritis	8	7	1	2	4	2	2	3	3		1				1	1	2	1	2		
Other Urinary Diseases	1		1	1			1						1								
Diseases of Female Generative System	1		1		1				1									1			
Puerperal Septicæmia	1		1		1				1					1							
Other Diseases of Pregnancy	3		3		3		1		2					1	2						
Diseases of Skin and Cellular Tissue	2	1	1	1	1		1		1	1								1			
Locomotor System	1	1				1			1										1		
Malformations																					
Congenital Debility	9	6	3	9			9			9											
Senile Debility	7	3	4		2	5		2	5										2	3	2
Other Causes and Ill-Defined	1	1		1			1					1									
Violence	21	18	3	13	8		11	1	9	1	4	3	2	3	2	4	1	1			
Suicides	5	5		1	4		1	1	3					1	1	2		1			
Accidents	15	12	3	12	3		10		5	1	4	3	2	2	1	1	1				
Homicides	1	1			1				1							1					

TABLE No. 9.

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of August, 1898.

The Annual Death Rate per 1,000 for the month was 14.87 on an estimated population of 280,000.

During the month there were 11 deaths more than for the corresponding month of 1897.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.											
		Male.	Female.	Single.	Married.	Widowed	Milw'kee.	U.S. other than Mil.	Foreign.	Under 1 year.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
TOTAL—All Causes	353	186	167	246	89	18	220	41	92	158	45	4	17	19	26	16	19	24	18	5	2	...
General Diseases	82	42	40	47	31	4	41	14	27	15	11	1	9	12	13	7	2	9	3	...	...	...
Typhoid Fever	2	1	1	1	1	...	...	1	1	...	...	...	...	...	2	...	...	...	...	...	...	...
Measles	2	1	1	2	...	...	2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough	10	5	5	10	...	...	9	1	...	7	3	...	...	...	...	...	...	...	...	...	...	...
Diphtheria and Membranous Croup	4	3	1	4	...	...	3	1	...	...	3	1	...	...	...	...	...	...	...	...	...	...
Other Epidemic Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pulmonary Tuberculosis	27	11	16	12	15	...	9	8	10	...	1	...	5	7	8	3	...	3	...	...	...	...
Other Tubercular Diseases	17	12	5	11	4	2	12	...	5	7	1	...	2	4	1	...	...	1	1	...	...	...
Cancer	13	4	9	2	10	1	2	1	10	...	...	...	...	1	...	4	2	4	2	...	...	...
Other General Diseases	7	5	2	5	1	1	4	2	1	1	1	...	2	...	2	...	...	1	...	...	...	...
Local Diseases	246	121	125	190	42	14	174	22	50	143	33	1	6	6	8	6	12	12	12	5	2	...
Meningitis	13	3	10	11	2	...	11	1	1	6	3	1	1	2	...	...	...	...	...	...	...	...
Apoplexy	10	4	6	1	7	2	1	2	7	...	1	...	...	...	...	...	3	5	1	...	...	...
Other Diseases of Brain and Membranes	5	1	4	4	1	...	3	1	1	3	1	...	...	...	...	...	...	...	...	...	1	...
Paralysis	2	1	1	...	1	1	...	...	2	...	...	...	...	...	...	...	...	...	1	1	...	...
Convulsions	6	2	4	6	...	...	6	...	...	5	1	...	...	...	...	...	...	...	...	...	...	...
Other Nervous Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

Local Diseases—Continued.																						
Organic Heart Diseases	11	2	9	2	7	2	1	3	7	1	...	...	...	...	...	...	6	1	3	...	...	...
Other Diseases of Circulatory System	1	1	...	1	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...
Bronchitis	4	2	2	3	...	1	3	...	1	3	...	...	...	...	...	...	...	...	1	...	...	...
Pneumonia	7	5	2	6	1	...	5	1	1	1	2	...	2	...	...	...	1	...	...	1	...	...
Broncho-pneumonia	5	3	2	3	2	...	3	1	1	2	1	...	...	1	...	...	...	1	...	...	...	...
Asthma	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pleurisy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Respiratory Diseases	1	1	...	1	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Gastritis	2	1	1	1	...	1	1	...	1	1	...	...	...	...	...	...	...	...	...	1	...	...
Diarrhœal Diseases	115	60	55	112	3	...	107	6	2	90	22	...	...	...	1	...	...	1	1	...	...	...
Appendicitis and Peritonitis	3	1	2	2	1	...	...	1	2	...	...	..	1	2	...	...	...	...	...	...	...	...
Hernia and Intest. Obstruction	1	...	1	...	...	1	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...
Cirrhosis of Liver	1	...	1	...	1	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...
Other Digestive Diseases	11	5	6	8	2	1	8	1	2	8	...	...	...	...	...	1	...	1	1	...	...	..
Nephritis	13	10	3	4	7	2	2	2	9	...	...	...	2	1	3	3	1	3	...	...	...	...
Other Urinary Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diseases of Female Generative System	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Septicæmia	2	...	2	...	2	...	...	...	2	...	...	...	...	1	1	...	...	...	...	...	...	...
Other Diseases of Pregnancy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diseases of Skin and Cellular Tissue	2	1	1	...	2	...	...	...	2	...	...	...	...	...	...	1	...	...	1	...	...	...
Locomotor System	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Malformations	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Congenital Debility	23	13	10	23	...	...	21	2	...	21	2	...	...	...	...	...	...	...	...	...	...	...
Senile Debility	5	3	2	...	2	3	...	...	5	...	...	...	...	...	...	...	...	...	2	2	1	...
Other Causes and Ill-Defined	3	2	1	2	1	...	1	1	1	1	...	...	...	...	...	1	...	...	1	...	...	...
Violence	25	23	2	9	16	...	5	5	15	...	1	2	2	1	5	3	5	3	3	...	...	...
Suicides	9	7	2	1	8	...	...	2	7	...	...	...	...	...	2	1	1	2	3	...	...	...
Accidents	16	16	...	8	8	...	5	3	8	...	1	2	2	1	3	2	4	1	...	...	...	...
Homicides	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE No. 10.

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of September, 1898.

The Annual Death Rate per 1,000 for the month was 13.65 on an estimated population of 280,000.

During the month there were 24 deaths more than for the corresponding month of 1897.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.												
		Male.	Female.	Single.	Married.	Widowed	Milw'kee.	U.S. other than Mil.	Foreign.	Under 1 year.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
TOTAL—All Causes	324	173	151	210	92	22	196	37	91	135	30	10	11	26	26	19	21	18	21	6	1	...
General Diseases	73	32	41	33	37	3	29	13	31	8	6	3	4	15	15	6	8	5	3	...	...	...
Typhoid Fever	7	6	1	5	2	...	1	5	1	...	...	...	2	2	3	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	1	...	1	1	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough	9	5	4	9	...	...	9	...	...	5	4	...	...	...	...	...	...	...	...	...	...	...
Diphtheria and Membranous Croup	1	...	1	1	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Other Epidemic Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pulmonary Tuberculosis	27	13	14	10	17	...	12	4	11	1	1	1	...	10	8	2	3	1	...	...	...	...
Other Tubercular Diseases	7	4	3	2	4	1	2	1	4	...	...	2	...	1	3	...	...	1	...	...	...	...
Cancer	13	3	10	2	9	2	2	1	10	...	...	...	1	1	...	3	5	1	2	...	...	...
Other General Diseases	8	1	7	3	5	...	3	...	5	2	...	...	...	1	1	1	...	2	1	...	...	...
Local Diseases	229	127	102	164	47	18	161	21	47	126	23	6	5	7	8	8	9	12	18	6	1	...
Meningitis	8	7	1	8	...	...	7	...	1	2	2	2	2	...	...	...	...	...	...	...	...	...
Apoplexy	8	7	1	1	7	...	1	1	6	...	1	...	...	...	...	2	2	1	2	...	...	...
Other Diseases of Brain and Membranes	1	1	...	1	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Paralysis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Convulsions	14	9	5	14	...	...	14	...	...	13	1	...	...	...	...	...	...	...	...	...	...	...
Other Nervous Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

Local Diseases—Continued.																					
Organic Heart Diseases	16	6	10	5	8	3	6	1	9	1	...	...	2	1	3	1	2	1	5	...	...
Other Diseases of Circulatory System	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bronchitis	7	3	4	3	3	1	3	...	4	2	1	...	...	...	...	...	...	1	2	1	...
Pneumonia	5	5	...	3	...	2	3	1	1	1	...	1	...	1	...	...	...	1	...	...	1
Broncho-pneumonia	2	1	1	2	...	...	2	...	...	...	2	...	...	...	...	...	...	...	...	...	...
Asthma	2	2	...	1	...	1	1	...	1	...	...	...	...	1	...	...	...	...	1	...	...
Pleurisy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Respiratory Diseases	1	...	1	1	...	...	1	...	...	...	...	.	1	...	...	...	...	...	...	...	...
Gastritis	6	1	5	4	1	1	4	1	1	4	...	...	...	...	...	1	...	...	...	1	...
Diarrhœal Diseases	93	51	42	87	4	2	85	3	5	73	12	2	...	...	1	1	1	1	2	...	...
Appendicitis and Peritonitis	5	2	3	1	4	..	1	2	2	...	..	1	...	2	1	...	...	...	1	...	...
Hernia and Intest. Obstruction	3	1	2	1	...	2	...	1	2	1	...	...	...	...	...	...	...	1	...	1	...
Cirrhosis of Liver	2	2	...	...	2	...	...	...	2	...	...	...	...	...	...	1	1	...	...	...	...
Other Digestive Diseases	2	1	1	1	1	...	1	1	...	1	...	...	...	...	...	...	...	...	1	...	...
Nephritis	8	4	4	1	4	3	1	2	5	1	...	...	...	...	...	...	2	4	1	...	...
Other Urinary Diseases	3	2	1	...	1	2	...	1	2	...	...	...	...	...	...	1	...	1	...	1	...
Diseases of Female Generative System	2	...	2	...	2	...	...	2	...	...	...	...	...	...	1	...	1	...	...	...	...
Puerperal Septicæmia	3	...	3	...	3	...	2	...	1	...	...	...	...	2	1	...	...	...	...	...	...
Other Diseases of Pregnancy	1	...	1	...	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...
Diseases of Skin and Cellular Tissue	2	2	...	1	1	...	1	1	...	1	...	...	...	...	...	1	...	...	...	...	...
Locomotor System	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Malformations	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Congenital Debility	29	16	13	29	...	...	28	1	...	26	3	...	...	...	...	...	...	...	...	...	...
Senile Debility	6	4	2	...	5	1	...	2	4	...	...	...	...	...	...	...	...	1	3	2	...
Other Causes and Ill-Defined	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Violence	22	14	8	13	8	1	6	3	13	1	1	1	2	4	3	5	4	1	...	...	...
Suicides	7	3	4	3	3	1	2	2	3	...	...	...	...	3	1	2	...	1	...	...	...
Accidents	15	11	4	10	5	...	4	1	10	1	1	1	2	1	2	3	4	...	...	...	...
Homicides	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE No. 11.

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of October, 1898.

The Annual Death Rate per 1,000 for the month was 10.41 on an estimated population of 280,000.

The number of deaths for the month was the same as for the corresponding month of 1897.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.												
		Male.	Female.	Single.	Married.	Widowed	Milw'kee.	U.S. other than Mil.	Foreign.	Under 1 year.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
TOTAL—All Causes	247	134	113	138	81	28	137	28	82	84	25	8	11	21	18	11	19	20	17	12	1	...
General Diseases	65	37	28	36	26	3	35	12	18	6	14	4	6	12	8	5	6	1	2	1	...	...
Typhoid Fever	4	4	...	3	1	...	1	2	1	...	...	...	1	2	1	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough	5	2	3	5	...	...	5	...	...	1	4	...	...	...	...	...	...	...	...	...	...	...
Diphtheria and Membranous Croup	7	5	2	7	...	...	7	...	...	...	4	3	...	...	...	...	...	...	...	...	...	...
Other Epidemic Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pulmonary Tuberculosis	24	14	10	9	13	2	9	6	9	1	1	...	4	8	1	4	4	...	1	...	...	...
Other Tubercular Diseases	7	3	4	7	...	...	7	...	...	2	4	...	...	...	1	...	...	...	...	...	...	...
Cancer	8	4	4	...	7	1	1	1	6	...	...	...	...	1	2	1	1	1	1	1	...	...
Other General Diseases	10	5	5	5	5	...	5	3	2	2	1	1	1	1	3	...	1	...	...	...	...	...
Local Diseases	168	86	82	100	43	25	79	13	58	78	10	3	5	6	7	4	10	19	14	11	1	...
Meningitis	4	1	3	3	1	...	3	...	1	3	...	...	...	...	...	...	1	...	...	...	...	...
Apoplexy	7	2	5	...	2	5	...	1	6	...	...	...	...	...	1	...	1	2	1	2	...	...
Other Diseases of Brain and Membranes	4	3	1	1	2	1	1	1	2	1	...	...	...	...	...	...	...	1	1	1	...	...
Paralysis	1	...	1	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Convulsions	10	2	8	10	...	...	10	...	...	9	1	...	...	...	...	...	...	...	...	...	...	...
Other Nervous Diseases	1	1	...	1	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...

Local Diseases—Continued.																						
Organic Heart Diseases	17	8	9	...	9	8	...	1	16	...	...	...	...	...	1	1	3	8	2	2	...	...
Other Diseases of Circulatory System	5	5	...	1	2	2	...	2	3	...	...	...	1	...	...	...	1	...	2	1	...	...
Bronchitis	4	2	2	3	...	1	3	...	1	1	1	1	...	...	...	...	...	...	...	1	...	...
Pneumonia	9	4	5	2	6	1	...	1	8	...	1	...	...	1	2	1	1	3	...	...	...	...
Broncho-pneumonia	3	3	...	3	...	...	2	1	...	2	...	...	1	...	...	...	...	...	...	...	...	...
Asthma	2	2	...	...	1	1	...	...	2	...	...	...	...	...	...	...	...	...	1	1	...	...
Pleurisy	2	...	2	1	1	...	1	1	...	...	...	...	...	2	...	...	...	...	...	...	...	...
Other Respiratory Diseases	2	1	1	1	1	...	2	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...
Gastritis	6	5	1	6	...	...	5	...	1	4	1	...	...	1	...	...	...	...	...	...	...	...
Diarrhœal Diseases	31	14	17	29	2	...	28	1	2	25	4	...	...	...	...	...	1	...	1	...	...	...
Appendicitis and Peritonitis	2	1	1	2	...	...	2	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...
Hernia and Intest. Obstruction	2	2	...	...	2	...	...	...	2	...	...	...	...	...	...	...	...	1	1	...	...	...
Cirrhosis of Liver	1	1	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...
Other Digestive Diseases	11	4	7	6	4	1	6	1	4	4	1	...	1	...	1	...	1	1	2	...	...	...
Nephritis	4	3	1	1	3	...	1	1	2	...	...	1	...	...	...	...	...	2	1	...	...	...
Other Urinary Diseases	2	2	...	...	1	1	1	...	1	...	...	...	...	...	...	1	...	...	1	...	...	...
Diseases of Female Generative System	2	...	2	...	1	1	1	1	...	...	...	...	...	...	1	...	1	...	...	...	...	...
Puerperal Septicæmia	2	...	2	1	1	...	1	...	1	...	...	...	...	...	1	1	...	...	...	...	...	...
Other Diseases of Pregnancy	1	...	1	...	1	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...
Diseases of Skin and Cellular Tissue	3	1	2	3	...	...	3	...	...	1	1	...	1	...	...	...	...	...	...	...	...	...
Locomotor System	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Malformations	1	1	...	1	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Congenital Debility	25	14	11	25	...	...	25	...	...	25	...	...	...	...	...	...	...	...	...	...	...	...
Senile Debility	4	4	...	...	2	2	...	...	4	...	...	...	...	...	...	...	...	...	1	3	...	...
Other Causes and Ill-Defined	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Violence	14	11	3	2	12	...	5	3	6	...	1	1	...	3	3	2	3	...	1	...	...	...
Suicides	5	3	2	...	5	...	2	1	2	...	...	...	...	2	...	2	1	...	...	...	...	...
Accidents	9	8	1	2	7	...	3	2	4	...	1	1	...	1	3	...	2	...	1	...	...	...
Homicides	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE No. 12.

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of November, 1898.

The Annual Death Rate per 1,000 for the month was 12.24 on an estimated population of 280,000.

During the month there were 7 deaths more than for the corresponding month of 1897.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.												
		Male.	Female.	Single.	Married.	Widowed	Milw'kee.	U.S. other than Mil.	Foreign.	Under 1 year.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
TOTAL—All Causes	281	147	134	152	87	42	141	34	106	72	32	15	10	21	21	27	22	26	19	14	2	...
General Diseases	68	31	37	40	23	5	37	14	17	4	12	5	7	13	6	8	9	2	1	1	...	...
Typhoid Fever	4	3	1	4	...	...	2	2	...	...	...	1	1	2	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough	3	2	1	3	...	...	2	1	...	2	1	...	...	...	...	...	...	...	...	...	...	...
Diphtheria and Membranous Croup	12	7	5	12	...	...	11	1	...	...	7	4	1	...	...	...	...	...	...	...	...	...
Other Epidemic Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pulmonary Tuberculosis	19	4	15	8	9	2	8	6	5	...	...	...	3	5	3	5	3	...	...	...	...	...
Other Tubercular Diseases	7	3	4	6	1	...	6	1	...	2	2	...	...	3	...	...	...	...	...	...	...	...
Cancer	13	6	7	1	9	3	1	1	11	...	...	...	...	...	1	3	5	2	1	1	...	...
Other General Diseases	10	6	4	6	4	...	7	2	1	...	2	...	2	3	2	...	1	...	...	...	...	...
Local Diseases	195	101	94	106	55	34	103	13	79	68	20	9	3	6	11	15	10	22	16	13	2	...
Meningitis	7	2	5	7	...	...	7	...	...	2	2	2	1	...	...	...	...	...	...	...	...	...
Apoplexy	13	7	6	1	5	7	1	2	10	...	...	...	...	1	...	1	2	3	4	2	...	...
Other Diseases of Brain and Membranes	5	4	1	4	1	...	4	...	1	1	2	...	...	1	...	...	...	1	...	...	...	...
Paralysis	1	...	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...
Convulsions	10	7	3	10	...	...	10	...	...	9	1	...	...	...	...	...	...	...	...	...	...	...
Other Nervous Diseases	1	1	...	1	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...

Local Diseases—Continued.																						
Organic Heart Diseases	19	7	12	3	14	2	3	1	15	...	...	...	2	1	2	3	4	5	1	1	...	...
Other Diseases of Circulatory System	2	...	2	...	1	1	...	...	2	...	...	...	...	...	...	...	1	...	1	...	...	...
Bronchitis	18	10	8	8	3	7	8	1	9	3	4	1	...	...	...	1	...	2	3	4	...	...
Pneumonia	16	9	7	9	6	1	8	3	5	4	4	1	...	...	2	2	...	3	...	...	...	...
Broncho-pneumonia	2	2	...	2	...	...	2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...
Asthma	1	...	1	...	...	1	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...
Pleurisy	2	2	...	...	...	2	...	...	2	...	...	...	...	...	...	...	...	...	1	1	...	...
Other Respiratory Diseases	5	4	1	5	...	...	3	2	...	2	1	2	...	...	...	...	...	...	...	...	...	...
Gastritis	6	1	5	5	1	...	5	...	1	3	2	...	...	...	...	...	...	1	...	...	...	...
Diarrhœal Diseases	16	12	4	15	1	...	15	...	1	14	1	...	...	...	...	...	1	...	...	...	...	...
Appendicitis and Peritonitis	6	1	5	3	2	1	1	3	2	...	...	1	...	1	1	1	1	...	1	...	...	...
Hernia and Intest. Obstruction	3	1	2	1	1	1	1	...	2	1	...	...	...	...	...	...	1	...	...	1	...	...
Cirrhosis of Liver	1	...	1	...	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...
Other Digestive Diseases	14	6	8	7	6	1	8	...	6	6	...	1	...	...	2	3	...	1	1	...	...	...
Nephritis	6	3	3	...	4	2	1	...	5	...	...	...	...	1	1	1	...	2	1	...	...	...
Other Urinary Diseases	2	1	1	...	2	...	...	...	2	...	...	...	...	...	...	1	...	...	1	...	...	...
Diseases of Female Generative System	1	...	1	...	1	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Puerperal Septicæmia	2	...	2	...	2	...	...	...	2	...	...	...	...	...	1	1	...	...	...	...	...	...
Other Diseases of Pregnancy	1	...	1	...	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...
Diseases of Skin and Cellular Tissue	5	2	2	5	...	...	5	...	...	3	1	1	...	...	...	...	...	...	...	...	...	...
Locomotor System	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Malformations	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Congenital Debility	20	13	7	20	...	...	20	...	...	20	...	...	...	...	...	...	...	...	...	...	...	...
Senile Debility	10	5	5	...	2	8	...	...	10	...	...	...	...	...	...	...	...	2	2	4	2	...
Other Causes and Ill-Defined	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Violence	18	15	3	6	9	3	1	7	10	...	...	1	...	2	4	4	3	2	2	...	...	...
Suicides	3	2	1	1	2	...	...	1	2	...	...	...	...	1	...	...	2	...	...	...	...	...
Accidents	15	13	2	5	7	3	1	6	8	...	...	1	...	1	4	4	1	2	2	...	...	...
Homicides	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE No. 13.

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of December, 1898.

The Annual Death Rate per 1,000 for the month was 13.91 on an estimated population of 280,000.

During the month there were 26 deaths more than for the corresponding month of 1897.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.												
		Male.	Female.	Single.	Married.	Widowed	Milw'kee.	U.S other than Mil.	Foreign.	Under 1 year.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
TOTAL—All Causes	330	174	156	171	108	51	154	35	141	88	31	7	16	28	19	26	29	21	42	20	3	...
General Diseases	90	51	39	42	40	8	35	13	42	7	7	3	9	19	10	9	13	7	4	2	...	...
Typhoid Fever	3	3	...	2	1	...	2	1	...	...	...	...	1	2	...	..	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough	1	...	1	1	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria and Membranous Croup	10	7	3	10	...	...	10	...	...	1	5	2	2	...	...	...	...	...	...	...	...	...
Other Epidemic Diseases	7	5	2	4	2	1	4	...	3	2	1	...	...	1	1	1	...	...	1	...	...	...
Pulmonary Tuberculosis	32	17	15	18	13	1	12	6	14	...	...	1	4	15	4	4	2	2	...	...	...	...
Other Tubercular Diseases	10	4	6	5	3	2	4	3	3	2	1	...	1	1	1	...	2	1	1	...	...	...
Cancer	18	9	9	...	14	4	...	1	17	...	...	...	...	...	1	4	6	3	2	2	...	...
Other General Diseases	9	6	3	2	7	...	2	2	5	1	...	...	1	...	3	...	3	1	...	...	...	...
Local Diseases	228	114	114	122	63	43	116	20	92	81	24	4	5	5	6	14	16	14	38	18	3	...
Meningitis	8	4	4	8	...	...	8	...	...	2	4	2	...	...	...	...	...	...	...	...	...	...
Apoplexy	10	8	2	...	7	3	1	...	9	...	...	...	...	...	...	1	1	2	3	3	...	...
Other Diseases of Brain and Membranes	7	5	2	2	3	2	1	1	5	1	...	...	1	...	...	...	1	1	2	1	...	...
Paralysis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Convulsions	7	3	4	7	...	...	7	...	...	7	...	...	...	...	...	...	...	...	...	...	...	...
Other Nervous Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

Local Diseases—Continued.																						
Organic Heart Diseases	30	15	15	6	16	8	7	2	21	2	...	...	3	...	2	5	2	3	8	5	...	...
Other Diseases of Circulatory System	1	...	1	...	1	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...
Bronchitis	20	14	6	12	5	3	10	1	9	6	5	...	...	1	...	...	1	2	4	1	...	...
Pneumonia	30	11	19	17	6	7	14	5	11	6	8	...	...	...	1	3	3	3	5	1	...	...
Broncho-pneumonia	11	5	6	7	2	2	6	1	4	6	1	...	...	...	...	...	...	...	3	1	...	...
Asthma	2	...	2	...	1	1	...	1	1	...	...	...	...	...	...	...	2	...	...	...	...	...
Pleurisy	1	...	1	1	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
Other Respiratory Diseases	2	1	1	1	...	1	1	...	1	1	...	...	...	...	...	...	...	...	...	...	1	...
Gastritis	8	4	4	6	...	2	6	...	2	5	1	...	...	...	...	...	...	...	2	...	...	...
Diarrhœal Diseases	10	5	5	10	...	...	10	...	...	6	3	1	...	...	...	...	...	...	...	...	...	...
Appendicitis and Peritonitis	3	...	3	...	3	...	...	...	3	...	...	...	...	...	2	1	...	...	...	...	...	...
Hernia and Intest. Obstruction	5	2	3	2	1	2	2	...	3	2	...	...	...	...	...	...	...	...	3	...	...	...
Cirrhosis of Liver	2	1	1	1	1	...	1	...	1	...	...	...	...	...	...	2	...	...	...	...	...	...
Other Digestive Diseases	13	8	5	8	5	..	7	2	4	5	2	...	1	...	...	2	3	...	...	...	...	...
Nephritis	6	4	2	2	4	...	1	1	4	1	...	...	...	...	...	...	1	2	1	1	...	...
Other Urinary Diseases	2	2	...	...	...	2	...	1	1	...	...	...	...	...	...	...	...	...	1	1	...	...
Diseases of Female Generative System	2	...	2	...	2	...	...	1	1	...	...	...	...	2	...	...	...	...	...	...	...	...
Puerperal Septicæmia	2	...	2	...	2	...	1	1	...	...	...	...	...	1	1	...	...	...	...	...	...	...
Other Diseases of Pregnancy	1	...	1	...	1	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
Diseases of Skin and Cellular Tissue	1	...	1	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...
Locomotor System	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Malformations	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Congenital Debility	31	17	14	31	...	...	31	...	...	31	...	...	...	...	...	...	...	...	...	...	...	...
Senile Debility	13	5	8	1	3	9	...	3	10	...	...	...	...	...	...	...	1	1	5	4	2	...
Other Causes and Ill-Defined	12	9	3	7	5	..	3	2	7	...	...	...	2	4	3	3	...	...	...	...	...	...
Violence	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Suicides	7	7	...	5	2	...	1	1	5	...	...	...	1	2	3	1	...	...	...	...	...	...
Accidents	5	2	3	2	3	...	2	1	2	...	...	...	1	2	...	2	...	...	...	...	...	...
Homicides	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE No. 14.

Showing, by months, the Number of Male and Female Decedents, and the Annual Death Rate per 1,000 population of each Sex.

Months.	Number of Deaths.			Death Rate per 1,000 of *Estimated Population.		
	Male.	Female.	Total.	Male.	Female.	Total.
January	145	139	284	6.33	6.06	12.39
February	113	107	220	4.93	4.67	9.60
March	150	121	271	6.54	5.28	11.82
April	152	121	273	6.63	5.28	11.91
May	149	113	262	6.50	4.93	11.43
June	136	109	245	5.93	4.76	10.69
July	136	112	248	5.84	4.80	10.64
August	186	167	353	7.97	6.90	14.87
September	173	151	324	7.41	6.24	13.65
October	134	113	247	5.34	4.77	10.41
November	147	134	281	6.40	5.84	12.24
December	174	156	330	7.61	6.30	13.91
Totals	1795	1543	3338	6.41	5.51	11.92

*Population estimated January to June at 275,000; July to December, 280,000.

TABLE No. 15.

Showing, by wards, the Estimated Population, Total Deaths, Annual Death Rate, and the Number of Deaths from some of the more important causes for the year 1898.

WARDS.	Estimated Population.	Total Deaths.	Annual Death Rate Per Thousand.	Deaths Under ONE Year.	Deaths ONE to FIVE Years.	Causes of Death.									
						Diphtheria and Membranous Croup.	Scarlet Fever.	Typhoid Fever.	Acute Intestinal Diseases.		Tubercular Diseases.	Pneumonia.	Bronchitis.	Diseases of Nervous System.	Diseases of Circulatory System.
									Under One Year.	Over One Year.					
First	10,680	81	7.59	11	7	.....	..	....	3	1	11	6	3	16	10
Second	11,070	113	10.21	26	15	4	..	1	10	7	12	8	10	11	15
Third	5,370	75	13.97	22	6	1	..	2	7	3	9	2	12	15	5
Fourth	10,980	106	9.65	16	5	1	..	2	8	6	20	6	6	10	10
Fifth	10,810	138	12.77	39	14	4	..	1	9	11	14	9	7	19	10
Sixth	15,120	150	9.92	37	12	2	..	....	9	4	27	10	10	19	10
Seventh	7,400	71	9 59	9	4	.....	..	1	1	3	7	2	1	11	8
Eighth	17,540	193	11.00	44	14	1	1	5	14	3	25	9	8	26	18
Ninth	19,020	200	10.51	64	16	8	..	4	24	9	21	15	5	29	13
Tenth	18,030	191	10.59	54	24	11	..	2	16	4	28	13	11	33	9
Eleventh	20,940	261	12.46	114	35	2	..	....	41	18	25	20	24	36	13
Twelfth	12,940	171	13.21	62	20	1	..	2	27	10	23	14	8	18	9
Thirteenth	17,180	194	11.29	75	15	4	..	1	27	5	30	12	10	28	17
Fourteenth	19,260	229	11.89	116	34	3	..	1	46	16	22	26	11	29	3
Fifteenth	12,380	117	9.45	26	9	2	..	3	11	5	15	7	6	14	10
Sixteenth	8,680	74	8.29	12	2	1	..	4	3	1	12	1	1	9	7
Seventeenth	9,970	91	9.13	24	16	1	..	1	11	4	14	9	3	9	3
Eighteenth	12 490	136	10.88	42	9	.....	..	3	13	3	18	11	8	11	9
Nineteenth	15,090	167	11.07	49	28	7	..	1	12	8	26	18	8	24	10
Twentieth	14,600	155	10.62	49	16	7	..	1	19	13	27	7	8	15	10
Twenty-first	10,450	123	10.77	35	15	1	1	1	14	8	13	10	3	20	8
Hospitals and Public Institutions	.....	302	.....	84	20	.....	..	10	30	18	31	12	19	17	17
Total	280,000	3,338	11.92	1,010	336	61	2	46	355	160	430	227	182	419	224

TABLE No. 16.

Showing, by months, the Number of Deaths occuring in the various Public and Private Institutions, Hospitals, Reformatories, etc., for the year 1898.

Hospitals and Institutions.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
House of Correction	...	...	...	...	...	...	1	...	...	...	1	...	2
House of Mercy	...	...	...	...	...	...	...	...	...	...	...	2	2
Infants' Home	...	...	3	1	1	...	1	...	...	1	2	...	9
Johnson Emergency Hospital	1	...	3	3	...	2	2	4	4	3	4	3	29
Little Sisters of the Poor	1	2	1	2	...	...	...	...	...	1	2	5	14
Milwaukee Children's Hospital	...	1	...	...	...	...	...	...	1	...	...	1	3
Milwaukee (Passavant) Hospital	2	1	3	2	5	3	4	4	4	4	3	4	39
Milwaukee Pulmonary Sanitorium	...	...	...	...	...	...	1	2	...	...	...	1	4
Notre Dame Convent	...	...	4	1	...	...	3	...	...	...	1	1	10
Presbyterian Hospital	1	1	2	1	...	...	...	...	...	...	...	...	5
Protestant Home for Aged	...	...	1	...	2	...	...	...	...	...	...	1	4
Protestant Orphan Asylum	...	...	...	1	...	...	...	...	...	...	...	...	1
St. John's Home	...	...	...	...	...	...	...	...	...	1	...	...	1
St. Joseph's Hospital	...	...	1	1	4	4	2	3	4	...	6	1	26
St. Mary's Hospital	5	3	3	3	3	...	...	...	3	1	...	1	22
St. Rose's Orphan Asylum	...	...	1	...	...	...	...	...	...	...	...	...	1
St. Vincent's Orphan Asylum	6	4	3	8	4	10	8	11	9	7	3	7	80
Trinity Hospital	3	5	2	2	2	4	2	...	1	2	4	3	30
Wisconsin General Hospital	1	3	3	2	1	1	1	1	1	3	1	2	20
Total	20	20	30	27	22	24	25	25	27	23	27	32	302

TABLE No. 17.

Showing Nativity of those dying in the city during the year 1898.

Milwaukee	1,707	Vermont	7
Wisconsin other than Milwaukee	148	Virginia	3
Connecticut	9	Other of United States, not specified	13
Delaware	1	Armenia	1
District of Columbia	2	Austria-Hungary	56
Illinois	30	Belgium	1
Indiana	3	Canada	20
Iowa	5	Denmark	6
Kentucky	2	England	37
Maine	5	France	5
Maryland	6	Germany	834
Massachusetts	10	Holland	22
Michigan	16	Ireland	93
Minnesota	5	Italy	4
Missouri	5	Norway	34
Nebraska	1	Poland	90
New Hampshire	3	Russia	9
New Jersey	2	Scotland	15
New York	75	Sweden	5
Ohio	18	Switzerland	5
Pennsylvania	17	Wales	7
Tennessee	1	Total	3,338

TABLE No. 18.

Showing, by months, the Disposition in the various Cemeteries and otherwise, of the bodies of those dying in the city, and including also still births and bodies brought into the city for burial.

Cemeteries, Etc.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Union	91	70	100	93	105	87	79	93	91	89	101	113	1,112
Forest Home	65	41	48	50	48	74	59	56	71	34	48	74	668
Calvary	82	68	77	80	78	73	72	112	82	74	82	88	968
Polish Union	28	26	38	33	22	23	46	55	53	28	37	32	421
Pilgrim's Rest	32	26	26	30	23	16	22	29	24	31	22	33	314
Wanderer's Rest	13	6	9	7	8	5	11	19	19	6	9	12	124
Trinity	11	5	6	14	6	7	9	11	12	6	7	15	109
Greenwood	2	1	2	1	...	2	1	1	1	...	...	2	13
Spring Hill	3	2	1	2	3	1	1	3	3	3	3	...	25
Second Home	3	2	1	1	2	2	2	3	3	...	3	1	23
County Cemetery	4	3	6	8	6	6	2	11	4	5	3	3	61
Outside Milwaukee County	23	23	28	36	30	21	22	25	25	25	27	28	313
For Anatomical Purposes	1	1	...	...	...	...	...	3	...	...	2	5	12
Total	358	274	342	355	331	317	326	421	388	301	344	406	4,163

BIRTHS.

TABLE No. 19.

Showing, by months, the Total Number Reported, their Color, Sex and by Whom Reported.

Months.	Color.		Sex.		By Whom Reported.			Total.
	White	Black.	Male.	Female.	Physician.	Midwife.	Parents.	
January	597	2	289	310	172	427	.....	599
February	645	.....	360	285	146	499	.....	645
March	668	.....	339	329	169	499	.....	668
April	677	.....	342	335	187	490	.....	677
May	556	2	264	294	151	405	2	558
June	572	.....	290	282	194	378	.....	572
July	624	.....	314	310	163	461	.....	624
August	683	.....	363	320	161	519	1	683
September	691	.....	373	318	200	491	.....	691
October	782	.....	422	360	180	602	.....	782
November	619	.....	324	295	163	456	.....	619
December	678	.....	372	306	206	472	.....	678
Total	7,792	4	4,052	3,744	2,094	5,699	3	7,796

TABLE No. 20.

Showing, by months, the Nativity of Parents of Children whose Births were reported during the year 1898.

Nativity of Parent.	Fathers.													Mothers.												
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Milwaukee	85	94	90	99	82	92	87	102	117	115	103	272	1,338	118	108	113	108	119	95	109	116	138	132	114	120	1,390
Wisconsin, other than Mil.	55	48	42	67	30	38	59	53	51	62	51	110	666	73	57	62	76	48	54	67	83	68	78	77	80	823
Other parts of the U. S.	62	69	87	76	81	59	80	74	91	76	59	62	876	62	83	88	98	75	69	88	75	98	92	58	93	979
Germany	285	315	325	326	248	256	266	320	297	368	265	84	3,355	251	295	290	294	221	246	230	296	274	335	260	259	3,251
Other European Countries	106	111	118	105	115	124	131	126	128	160	135	149	1,508	82	100	115	100	94	105	120	113	112	145	108	126	1,320
Unknown, or not stated	6	8	6	4	2	3	1	8	7	1	6	1	53	3	2	...	1	1	3	...	...	1	...	2	...	13
Total	599	645	668	677	558	572	624	683	691	782	619	678	7,796	599	645	668	677	558	572	624	683	691	782	619	678	7,796

TABLE No. 21.

Showing, by months, the Number of Births Reported from each Ward during the year 1898.

WARDS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
First	8	13	5	9	8	8	10	10	9	8	7	15	110
Second	17	16	24	20	15	13	23	16	25	22	14	16	221
Third	11	11	15	6	10	8	11	12	13	22	7	14	140
Fourth	17	7	12	4	7	9	11	6	9	8	10	11	111
Fifth	16	17	11	15	17	9	13	8	16	13	12	15	162
Sixth	20	35	23	30	23	15	20	29	24	36	23	21	299
Seventh	5	6	3	2	5	6	3	2	6	3	3	2	46
Eighth	18	26	22	23	15	15	36	24	30	39	30	30	308
Ninth	30	38	52	53	35	30	45	28	42	42	39	47	481
Tenth	37	27	33	30	32	25	35	34	28	38	34	30	383
Eleventh	55	71	63	58	40	53	60	71	75	78	64	70	758
Twelfth	29	30	27	32	27	27	24	33	32	42	42	26	371
Thirteenth	43	40	43	51	36	38	50	54	34	61	47	52	549
Fourteenth	60	81	76	69	71	64	63	70	99	86	90	60	889
Fifteenth	12	17	20	21	12	14	20	26	19	10	17	16	204
Sixteenth	5	9	4	8	7	7	7	6	9	5	13	10	90
Seventeenth	14	27	17	20	14	23	21	25	22	35	14	28	260
Eighteenth	24	32	43	28	25	27	27	33	21	50	16	38	364
Nineteenth	44	42	51	45	39	49	42	62	57	46	42	48	567
Twentieth	46	32	45	47	34	50	34	57	39	53	34	45	516
Twenty-first	21	29	25	45	30	19	29	24	24	42	24	41	353
Wards not specified	67	39	54	61	56	63	40	53	58	43	37	43	614
Total	599	645	668	677	558	572	624	683	691	782	619	678	7,796

TABLE No. 22.

Showing, by wards, the Number of Births and the Annual Birth Rate per 1,000 during the year 1898.

WARDS.	Estimated Population.	Births Reported.	Annual Birth Rate Per 1,000 Population.
First	10,680	110	10.30
Second	11,070	221	19.96
Third	5,370	140	26.07
Fourth	10,980	111	10.11
Fifth	10,810	162	14.99
Sixth	15,120	299	19.77
Seventh	7,400	46	6.21
Eighth	17,540	308	17.56
Ninth	19,020	481	25.28
Tenth	18,030	383	21.24
Eleventh	20,940	758	36.19
Twelfth	12,940	371	28.67
Thirteenth	17,180	549	31.95
Fourteenth	19,260	889	46.15
Fifteenth	12,380	204	16.48
Sixteenth	8,680	90	10.37
Seventeenth	9,970	260	26.08
Eighteenth	12,490	364	29.14
Nineteenth	15,090	567	37.57
Twentieth	14,600	516	35.34
Twenty-first	10,450	353	33.78
Wards not specified	.....	614	.....
Total	280,000	7,796	28.09

TABLE No. 23.

Showing, by months, the Total Number of Births Reported, the Birth Rate per 1,000, the Number of Males and Females, together with the Percentage to Total Births of each Sex.

MONTHS.	Number of Births Reported.	Birth Rate per 1,000.	Males.	Females.	Percentage of Males to Total.	Percentage of Females to Total.
January	599	25.70	289	310	48.25	51.75
February	645	30.49	360	285	55.81	44.19
March	668	28.66	339	329	50.75	49.25
April	677	30.03	342	335	50.52	49.48
May	558	23.94	264	294	47.31	52.69
June	572	25.37	290	282	50.70	49.30
July	624	26.29	314	310	50.32	49.68
August	683	28.79	363	320	53.15	46.85
September	691	30.11	373	318	53.98	46.02
October	782	32.95	422	360	53.96	46.04
November	619	27.00	324	295	52.34	47.66
December	678	28.57	372	306	54.87	45.13
Total	7,796	28.09	4,052	3,744	51.97	48.03

MARRIAGES.

TABLE No. 24.

Showing, by months, for the year 1898, the Total Number Recorded, together with Residence of Husband and Place of Birth of Bòth Contracting Parties.

Months.	Total Number Reported for Month.	Residence of Husband.					Place of Birth.							
		Milwaukee.	Wisconsin other than Milwaukee.	Chicago.	Illinois other than Chicago.	Other Places.	Milwaukee.		Wisconsin, other than Mil.		Other Parts of United States		Foreign.	
							Husband.	Wife.	Husband.	Wife.	Husband.	Wife.	Husband.	Wife.
January.....	221	130	24	39	11	17	33	54	39	40	71	63	78	64
February....	239	149	19	53	6	12	46	45	26	28	69	69	98	97
March.....	219	118	19	52	11	19	23	45	26	32	68	64	102	78
April.....	183	110	21	38	3	11	38	41	39	30	45	49	61	63
May.....	364	207	32	96	7	22	76	88	53	54	107	100	128	122
June.....	361	213	24	93	13	18	75	95	33	55	100	100	153	111
July.....	513	212	41	199	22	39	78	71	65	79	211	206	159	157
August.....	522	166	28	277	30	21	50	57	54	64	228	225	199	176
September...	444	169	23	209	22	21	55	67	42	51	190	182	157	144
October.....	487	254	44	141	26	26	78	129	72	54	145	143	192	161
November...	372	225	31	82	8	26	72	86	54	67	106	93	140	126
December....	281	170	36	58	6	11	62	70	44	56	82	75	93	80
Total.....	4206	2123	342	1337	165	239	686	848	547	610	1,422	1,369	1,551	1,379

REPORT OF ANALYST.

Dr. F. M. Schulz, Commissioner of Health:

DEAR SIR—I herewith submit a report of the work done in the Chemical and Bacteriological Laboratories of the Health Department during the year ending December 31st, 1898.

Special attention was paid to the milk supply of the city, and nearly 7,000 samples of milk were tested by the Babcock test. The good effects of constant supervision of the milk sold in the city, have been noted in several directions. Namely, improvement in the average fat content of milk sold ; a lower percentage of samples found below the standard, although the men known to have poor milk were watched more closely ; the driving out of small and careless dealers who were incompetent to conduct the milk business in a sanitary manner, and finally as a result of all these there was a general lowering of the death rate among infants.

Too much credit cannot be given to the two milk inspectors, to whose constant and untiring energy and interest these results are mainly due.

The analysis of lake and well water was carried on during the year, and especially the analysis of all the wells used by bakers. Many of these were found to be usable while some were in a very bad condition.

Of the 150 samples of well water analyzed, 98 were found unfit for use, 22 suspicious and 30, or 20 per cent were usable.

The following tables will explain themselves:

TABLE NO. 1.

Number of milk dealers licensed during the year	1,102
Total samples milk analyzed, Jan. 1, '98—Jan. 1, '99	6,919
Average fat of 6,919 samples	3.747%
Number of samples below 3.0 per cent butter fat	353
Per cent below 3.0 per cent	5.116%
Average fat of 353 samples	2.605%
Average fat of 6,566 samples	3.809%
Total samples brought in by inspectors	6 328
Average fat of 6,328 samples	3.76%
Number samples below 3.0 per cent	300
Per cent below 3.0 per cent	5.147%
Number of samples brought in by private individuals	591
Average fat of 591 samples	3.807%
Number of samples below 3.0 per cent	53
Per cent below 3 0 per cent	8.967%
Number of samples from depot	853
Average fat of 853 samples	3.801%
Number of samples below 3.0 per cent	21
Per cent below 3.0 per cent	2.461%
Number samples of cream analyzed	102
Average fat of 102 samples	17 787
Number of arrests made	148
Amount of fines imposed	$455.00
Skimmed milk and butter milk analyzed	10

TABLE No. 2.

MONTH.	Samples Milk Analyzed.	Average Fat.	No. Below 3.0 per cent.	Quarts.	Cream Analyzed.	Average Fat.	Arrests.	Fines.
January	551	3.91	13	9,388	10	12.9	7	$ 20.00
February	568	3.73	25	9,869	5	11.7	17	50.00
March	795	3.64	60	11,309	12	15.6	27	70.00
April	751	3.77	40	10,849	8	16.0	20	80.00
May	770	3.70	30	12,939	9	21.0	7	40.00
June	569	3.66	42	9,062	19	20.37	11	20.00
July	525	3.58	40	8,129	9	17.6	9	30.00
August	389	3.74	18	5,627	3	20.2	6	.....
September	505	3.66	33	7,545	4	19.5	13	20.00
October	395	3.81	24	7,015	5	19.3	13	50.00
November	552	3.84	17	8,076	3	19.2	9	50.00
December	549	3.95	11	9,312	15	19.03	9	25.00
	6919	3.747	353	109.120	102	17.787	148	$455.00

TABLE NO. 3.

	1896.	1897.	1898.
Number of analyses of milk made	2,134	4,673	6,919
Number samples below 3.0 per cent	191	254	353
Per cent below 3.0 per cent	8.95	5.43	5.12
Average fat	3.62	3.74	3.747
Number analyses cream made	37	54	102
Average fat of cream	19.2	19.4	17.8
Number arrests made	7	138	148
Amount of fines imposed	$116.00	$810.00	$455.00

The analyses made of Water from the several places indicated show the following result in 100,000 parts:

LAKE WATER—January, 1898.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.
City Pumping Station.....	3rd	None	Slight trace	0.0001	0.010	0.10	4.0	15	5
Laboratory tap.....	8th	"	"	0.0001	0.010	0.10	3.5	14	5
Laboratory tap.....	10th	"	"	0.0001	0.007	0.10	3.4	15	5
Laboratory tap.....	14th	"	"	0.0001	0.008	0.10	3.5	14	5
City Pumping Station.....	17th	"	"	0.0001	0.010	0.10	3.5	15	5
Laboratory tap.....	27th	"	"	0.0001	0.007	0.09	3.2	15	5
Laboratory tap.....	31st	"	None	0.0001	0.006	0.09	3.5	15	5
City Pumping Station.....	31st	"	"	0.0001	0.006	0.09	3.5	15	5

The analyses made of Water from the several places indicated show the following result in 100,000 parts:

LAKE WATER—February, 1898.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.
Laboratory tap.....	4th	None	None	0.0000	0.006	0.10	0.3	14	4
Laboratory tap.....	7th	"	"	0.0001	0.007	0.10	0.32	15	5
Laboratory tap.....	11th	"	"	0.0000	0.006	0.11	0.33	15	5
City Pumping Station.....	12th	"	"	0.0001	0.012	0.12	0.33	15	5
Laboratory tap.....	15th	"	"	0.0000	0.009	0.09	0.31	14	5
1007 Winnebago.....	19th	"	"	0.0001	0.008	0.10	0.34	15	5
Laboratory tap.....	22d	"	Slight trace	0.0000	0.007	0.10	0.39	15	5
13th Primary School No. 1	28th	"	None	None	0.008	0.11	0.31	15	4

The analyses made of Water from the several places indicated show the following result in 100,000 parts:

LAKE WATER—March, 1898.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.
Laboratory tap.....	9th	None	None	Trace	0.008	0.1	0.30	14	4
Laboratory tap.....	17th	"	"	0.0001	0.014	0.1	0.27	16	5
Laboratory tap.....	23d	"	"	0.0001	0.012	0.1	0.24	15	5
Laboratory tap.....	25th	"	"	0.0001	0.009	0.1	0.30	15	4
Laboratory tap.....	29th	"	"	0.0001	0.010	0.1	0.33	16	5

The analyses made of Water from the several places indicated show the following result in 100,000 parts:

LAKE WATER—April, 1898.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.
Laboratory tap.....	2d	None	None.	None	0.009	0.1	0.30	14	4
Laboratory tap.....	12th	"	"	0.0013	0.012	0.1	0.27	15	4
Laboratory tap.....	19th	"	"	None	0.008	0.1	0.30	15	4
Laboratory tap.....	25th	"	"	0.001	0.009	0.1	0.29	14	4
Laboratory tap.....	29th	"	"	0.001	0.010	0.1	0.30	15	4

The analyses made of Water from the several places indicated show the following result in 100,000 parts:

LAKE WATER—May, 1898.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.
Laboratory tap.....	5th	None	None	0.0010	0.010	0.1	0.32	15	5
Laboratory tap.....	10th	"	"	Trace	0.010	0.1	0.34	15	5
Laboratory tap.....	25th	"	Trace	0.0001	0.012	0.1	0.31	15	5
Laboratory tap.....	28th	"	"	Trace	0.018	0.1	0.35	15	5
Laboratory tap.....	30th	"	"	0.0001	0.014	0.1	0.35	14	4

The analyses made of Water from the several places indicated show the following result in 100,000 parts:

LAKE WATER—June, 1898.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.
Laboratory tap.....	8th	None	Trace	0.001	0.008	0.10	0.40	16.0	6.0
Laboratory tap.....	15th	"	None	Trace	0.008	0.10	0.35	13.0	3.0
Laboratory tap.....	22d	"	Trace	None	0.008	0.125	0.35	16.0	3.0
Laboratory tap.....	29th	"	None	0.002	0.008	0.10	0.35	11.0	3.0

The analyses made of Water from the several places indicated show the following result in 100,000 parts:

LAKE WATER—July, 1898.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.
Laboratory tap.....	6th	None	None	Trace	0.008	0.1	0.35	17.0	3.0
Laboratory tap.....	13th	"	"	None	0.005	0.1	0.33	9.0	3.0
Laboratory tap.....	20th	"	"	None	0.008	0.08	0.35	14.0	4.0
Laboratory tap.....	27th	"	"	0.001	0.008	0.11	0.35	10.0	3.0

The analyses made of Water from the several places indicated show the following result in 100,000 parts:

LAKE WATER—August, 1898.

PLACE.	Date.	Physical Appearance.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.
Laboratory tap.....	3d	Clear	None	None	Trace	0.006	0.085	0.35	15.0	5.0
Laboratory tap.....	10th	"	"	"	0.001	0.006	0.080	0.35	14.0	4.0
Laboratory tap.....	17th	Turbid	"	Trace	0.000	0.009	0.110	0.40	15.0	5.0
Laboratory tap.....	24th	Clear	"	"	0.002	0.007	0.120	0.35	15.0	5.0
Laboratory tap.....	31st	Sediment	"	"	0.000	0.009	0.120	0.33	16.0	5.5

The analyses made of Water from the several places indicated show the following result in 110,000 parts:

LAKE WATER—September, 1898.

PLACE.	Date.	Physical Appearance.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.
Laboratory tap.....	15th	Clear	None	None	0.001	0.007	0.150	0.35	16.0	7.0
Laboratory tap.....	21st	"	"	Trace	None	0.003	0.150	0.32	15.0	5.0
Laboratory tap,.....	28th	"	"	None	0.002	0.009	0.120	0.35	14.0	4.0

The analyses made of Water from the several places indicated show the following result in 100,000 parts:

LAKE WATER—October, 1898.

PLACE.	Date.	Physical Appearance.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.
Laboratory tap.....	5th	Turbid	None	Heavy Traces	0.002	0.008	0.12	0.35	18.0	4.0
Laboratory tap.....	12th	Sl. Turbid	"	Trace	0.002	0.011	0.17	0.33	14.0	6.0
Laboratory tap.....	19th	Turbid	"	"	0.003	0.011	0.15	0.33	15.0	5.0
Laboratory tap.....	26th	Very Turbid	"	"	0.002	0.012	0.17	0.33	20.0	5.0

The analyses made of Water from the several places indicated show the following result in 100,000 parts:

LAKE WATER—November, 1898.

PLACE.	Date.	Physical Appearance.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.
Laboratory tap.....	2d	Very Turbid	Trace	Trace	0.001	0.012	0.15	0.33	16.0	4.0
Laboratory tap.....	9th	Turbid	None	"	0.004	0.008	0.17	0:33	20.0	4.0
Laboratory tap.....	16th	Sl. Turbid	"	"	0.003	0.009	0.15	0.33	17.0	5.0
Laboratory tap.....	23d	"	"	"	0.002	0.010	0.15	0.33	16.0	5.0
Laboratory tap.....	30th	"	"	"	0.002	0.009	0.125	0.33	17.0	5.0

The analyses made of Water from the several places indicated show the following result in 100,000 parts:

LAKE WATER—December, 1898.

PLACE.	Date.	Physical Appearance.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.
Laboratory tap.....	7th	Sl. Turbid	None	Trace	0.002	0.010	0.14	0.33	15.0	6.0
Laboratory tap.....	15th	Clear	"	Heavy Trace	0.001	0.009	0.15	0.35	16.0	5.0
Laboratory tap.....	21st	"	"	"	0.002	0.011	0.16	0.35	14.0	4.0
Laboratory tap.....	28th	"	"	"	0.001	0.007	0.14	0.37	16.0	6.0

The analyses made of Water from the several places indicated show the following result in 100,000 parts:

WELL WATER—January, 1898.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.	For Use.
762 Eleventh Ave....	1st	Large excess	Heavy trace	0.0050	0.0126	0.10	17.5	150	50	Unfit.
887 Thirtieth St.....	3rd	1.2	Slight trace	0.0040	0.0156	0.10	20.0	190	60	"
915 Weil St.....	4th	0.6	Heavy trace	0.0060	0.0158	0.12	14.0	170	57	"
753 Eleventh St.....	11th	Large excess	Large excess	0.0020	0.1090	2.20	23.5	142	40	"
741 Second Ave.....	12th	"	Heavy trace	0.0280	0.3400	0.45	25.0	334	230	"
698 Kinnickinnic Ave.....	17th	None	Slight trace	0.0001	0.0050	0.01	3.0	20	7	Usable.
796 Tenth Ave.....	21st	Large excess	"	0.0030	0.0700	0.15	12.0	98	33	Unfit.
823 Mineral St.....	27th	None	"	0.0030	0.0130	0.10	8.0	94	31	Suspicious
Soldier's Home.....	29th	"	None	None	0.0070	0.09	0.5	66	21	Usable.

The analyses made of Water from the several places indicated show the following result in 100,000 parts:

WELL WATER—February, 1898.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.	For Use,
685 Muskego Ave....	14th	Large excess	Trace	0.1184	0.088	0.4	3.	202	70	Unfit.
506 Second St.....	16th	"	Large excess	0.055	0.04	0.2	6.	110	32	"

The analyses made of Water from the several places indicated show the following result in 100,000 parts:

WELL WATER—March, 1898.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.	For Use,
456 Twentyfourth St.	7th	Large excess	None	Trace	0.048	0.1	10	98	32	Unfit.
1006 Fourth Ave	8th	"	Heavy trace	0.006	0.08	0.3	20	148	49	"
694 Kinnickinnic Ave.....	17th	"	None	None	0.014	0.1	5	150	50	Usable.
Town Greenfield	17th	"	"	0.0001	0.008	0.1	4	130	40	"
1172 Kinnickinnic Ave.....	23rd	Present	"	Trace	0.008	0.1	4	100	35	"
118 Howell Ave.....	23rd	Large excess	Large excess	0.001	0.013	0.1	11	150	51	Unfit.
723 Lee St.....	24th	"	"	0.016	0.028	0.2	22	170	60	"
1286 Julia St.....	28th	"	Excess	0.001	1.016	0.3	20	180	90	"

The analyses made of Water from the several places indicated show the following result in 100,000 parts:

WELL WATER—April, 1898.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.	For Use,
Humboldt Ave.....	2d	None	None	0.0100	0.004	0.10	2.0	96	20	Usable,
916 Eleventh Ave....	19th	"	"	0.0004	0.004	0.10	18.0	150	39	"
153 Logan Ave.....	20th	Large excess	"	0.0030	0.014	0 19	10.5	150	45	Unfit.
723 Lee St.....	21st	"	Large excess	0.0140	0.029	0.21	15.0	165	59	"
1286 Julia St.....	22d	"	"	0.0010	0.017	0.35	21.5	189	89	"
1131 Twenty-first St..	23d	Present	Slight trace	Lge. ex	0.001	0.10	2.0	48	14	Suspicious
Whitefish Bay.....	25th	1.4	None	Trace	0.028	0.12	8.0	67	26	Unfit.
1373 Sixth St.....	27th	Large excess	Trace	0.005	0.022	0.20	15.0	160	80	"
696 Twentieth St.....	30th	"	Heavy trace	0.011	0.020	0.25	28.0	170	52	"

The analyses made of Water from the several places indicated show the following result in 100,000 parts:

WELL WATER—May, 1898.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.	For Use,
969 3d St.....	5th	Large excess	Trace	0.0010	0.012	0.12	25.0	134	52	Unfit.
726 2d Ave	11th	Trace	None	0.0001	0.006	0.10	3.0	54	14	Usable.
922 Winchester Ave..	12th	Large excess	"	0.0001	0.004	0.15	16.0	172	60	Unfit.
Whitefish Bay	15th	None	"	0.0001	0.015	0.10	2.0	44	17	Usable.
482 Lapham St.....	19th	Pres'nt	"	0.009	0.018	0.10	4.0	100	30	Suspicious
1144 7th St.....	23d	Large excess	Trace	0.0010	0.020	0.10	13.0	112	91	Unfit.
315 11th St.....	24th	"	"	0.0010	0.017	0.10	4.0	75	25	Suspicious

The analyses made of Water from the several places indicated show the following result in 100,000 parts:

WELL WATER—June, 1898.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.	For Use.
1227 20th St.....	3d	Large am't	None	0.004	0.036	0.275	12.4	145.0	55.0	Unfit.
153 Logan Ave	10th	"	"	0.008	0.008	0.210	16.9	122.0	60.0	"
1029 8th St.....	13th	"	Large am't	0.003	0.020	0.200	13.7	180.0	78.0	"
Polish Union Cemetery	17th	None	None	0.013	0.007	0.100	0.4	42.0	7.0	Usable.
Cold Spring and 35th Sts	17th	"	"	0.009	0.009	0.140	0.8	40.0	8.0	"
514 14th St.....	17th	Large am't	Trace	0.008	0.024	0.280	17.0	135.0	53.0	Unfit.
899 Fratney St	21st	"	None	0.002	0.018	0.195	26.4	240.0	120.0	"
1131 21st St.....	21st	"	Large am't	0.018	0.009	0.150	7.2	67.0	25.0	Suspicious
1152 8th St.....	24th	"	Heavy trace	0.000	0.009	.....	6.8	96.0	43.0	Usable.
610 16th St.....	25th	"	Trace	0.003	0.006	0.175	8.6	152.0	37.0	Suspicious
417 Rogers St	27th	"	None	en'm's am't	0.160	1.710	94.2	400.0	174.0	Unfit.
901 Fratney St	28th	"	Heavy trace	0.005	0.052	0.740	37.9	195.0	65.0	"
2302 Elm St	29th	"	Trace	0.0045	0.018	0.185	5.0	90.0	30.0	Suspicious
436 9th Ave	30th	"	V'y l'ge am't	0.005	0.038	0.465	17.5	235.0	115.0	Unfit.
1035 28th St.....	30th	"	"	0.004	0.016	0.100	8.6	100.0	50.0	Suspicious

The analyses made of Water from the several places indicated show the following result in 100,000 parts:

WELL WATER—July, 1898.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.	For Use.
1121 Weil St.....	2d	Large am't	V'y l'ge am't	.016	.016	0.17	20.2	216.0	110.0	Unfit.
503 Fifth St.....	2d	"	Trace	.007	.017	0.10	12.2	110.0	28.0	Suspicious
2001 Center St.....	6th	"	Large am't	.015	.020	0.10	7.9	120.0	60.0	Unfit.
690 Hanover St.....	7th	V'y l'ge am't	V'y l'ge am't	.007	.048	0.67	37.9	274.0	124.0	"
732 Fourth St.....	8th	Too	vile to	analyz	e.					"
1073 Holton St.....	8th	V'y l'ge am't	Large am't	.003	.019	0.125	16.3	205.0	105.0	"
406 Orchard St.....	11th	Large am't	None	None	.003	0.08	9.4	80.0	40.0	Usable.
500 Twenty-fourth St.	11th	V'y l'ge am't	Large am't	Trace	.008	0.10	24.5	170.0	80.0	Unfit.
922 Twenty-third St,.	13th	Large am't	V'y l'ge am't	.008	.019	0.275	12.6	110.0	50.0	"
999 Garden St.....	13th	"	Heavy trace	.003	.007	0.155	6.8	35.0	15.0	Usable.
774 Scott St.....	14th	None	None	None	.013	0.19	4.5	156.0	86.0	Suspicious
1121 Weil St.....	14th	Large am't	V'y l'ge am't	.004	.024	0.185	19.8	214.0	120.0	Unfit.
1304 Kneeland Ave...	15th	V'y l'ge am't	Large am't	Trace	.009	0.20	7.3	104.0	44.0	Suspicious
456 Twenty-fourth St.	15th	Large am't	Trace	.002	.011	0.16	27.0	148.0	44.0	Unfit.
597 Second Ave.....	19th	"	Large am't	.008	.038	0.35	12.8	90.0	46.0	"
979 Buffum St.....	19th	"	"	.005	.020	0.175	16.4	130.0	44.0	"
482 Lapham St.....	19th	Heavy trace	V'y l'ge am't	.006	.015	0.10	5.1	70.0	30.0	Suspicious
441 Twenty-first Ave.	20th	Large am't	Large am't	.002	.019	0.175	22.3	200.0	84.0	Unfit.
3117 Elm St	21st	"	Heavy trace	.009	.014	0.15	21.8	180.0	100.0	"
499 Madison St.....	22d	"	"	.019	.043	1.09	15.4	136.0	46.0	"
... Galena St	22d	"	Large am't	.003	.014	0.20	16.7	120.0	40.0	"
Fourth and Court Sts.	23d	"	Heavy trace	.002	.005	0.175	7.9	150.0	40.0	Suspicious
624 Eleventh St.....	25th	"	None	Enor's am't	.032	0.50	18.6	220.0	70.0	Unfit.
1260 Booth St.....	26th	V'y l'ge am't	V'y l'ge am't	.005	.021	0.30	20.3	180.0	100.0	"
315 Eleventh St.....	27th	Large am't	Trace	Trace	.006	0.18	2.4	74.0	28.0	Usable.
1025 Galena St.....	28th	V'y l'ge am't	V'y l'ge am't	0.096	.054	1.085	17.8	266.0	140.0	Unfit.
558 Scott St,.....	28th	Large am't	"	.014	.015	0.150	17.4	140.0	60.0	"
1087 Midland Ave....	29th	Trace	"	.006	.002	.075	3.3	42.0	14.0	Usable.
Second Ave. and Burnham St.....	29th	None	Trace	.036	.018	0.28	8.8	76.0	32.0	Unfit.
1916 Brown St.....	29th	Large am't	None	.006	.014	0.265	18.8	200.0	72.0	"
809 Eighth Ave.....	29th	None	Trace	.002	.010	0.115	1.8	42.0	8.0	Usable.
218-220 Sixth St.....	29th	"	None	.024	.003	0.09	0.5	34.0	16.0	"
923 Seventh Ave.....	29th	Large am't	Large am't	.004	.015	0.20	3.7	66.0	26.0	Suspicious

The analyses made of Water from the several places indicated show the following result in 100,000 parts:

WELL WATER—August, 1898.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.	For Use,
373 Ellen St.....	1st	Large am't	0.100	0.002	0.002	0.090	6.1	82.0	42.0	Suspicious
1048 Third St.....	1st	"	0.040	0.000	0.009	0.105	7.6	110.0	56.0	"
667 Scott St	1st	"	0.000	0.004	0.025	0.225	21.2	180.0	60.0	Unfit.
989 Eleventh Ave....	1st	None	0.012	0.000	0.010	0.075	2.8	90.0	60.0	Usable.
1109 Windlake Ave ..	1st	"	0.000	0.004	0.005	0.135	2.1	230.0	60.0	"
914 Eleventh Ave....	1st	"	Trace	0.000	0.017	0.175	0.3	74.0	24.0	Suspicious
672 Grant Street	1st	"	"	0.003	0.013	0.070	3.7	50.0	14.0	Usable .
511 Prairie St	2d	Heavy trace	0.000	0.088	0.018	0.260	12.4	152.0	58.0	Unfit.
612 Arthur St.....	3d	None	0.050	0.074	0.007	0.150	2.3	50.0	18.0	Usable.
1015 Wright St.	3d	Large am't	0.720	0.208	0.033	0.510	43.6	160.0	40.0	Unfit.
1006 Fourth Ave	3d	"	0.010	0.001	0.015	0.180	27.1	190.0	96.0	"
1031 Eighth St.....	5th	"	Trace	Enor's am't	0.028	0.410	15.7	272.0	110.0	"
1023 Eighth St.....	5th	None	None	0.025	0.016	0.210	9.4	130.0	30.0	"
969 Third St.....	9th	Large am't	Trace	0.002	0.011	0.170	13.8	82.0	32.0	"
1315 Booth St.....	24th	"	Large am't	0.006	0.032	0.210	1.6	60.0	36.0	"
1060 Holle Pl.....	25th	"	"	0.016	0.078	1.370	22.0	174.0	78.0	"
671 Superior St.....	25th	None	Trace	0.002	0.009	0.140	0.4	42.0	16.0	Usable.
1072 Holle Pl.....	26th	Large am't	Large am't	0.014	0.050	0.725	8.8	148.0	82.0	Unfit.
1074 Holle Pl.....	26th	"	"	0.000	0.030	0.325	9.2	112.0	56.0	"
1076 Holle Pl.....	26th	"	None	0.002	0.036	0.640	14.0	164.0	82.0	"
1086 Holle Pl.....	26th	"	Large am't	0.010	0.044	0.585	14.6	150.0	76.0	"
1916 Brown St.....	29th	"	"	0.004	0.026	0.675	16.2	274.0	110.0	"
381 Sixteenth Ave....	30th	"	Heavy trace	0.000	0.006	0.155	23.5	260.0	140.0	"
707 Wright St.....	30th	"	Large am't	0.001	0.038	0.260	39.5	396.0	140.0	"
322 Clark St.....	30th	None	None	0.015	0.020	0.375	25.7	132.0	54.0	"
876 Bremen St	30th	Large am't	Large am't	0.028	0.032	0.480	20.9	234.0	126.0	"
647 Mitchell St.....	30th	"	None	0.038	0.035	0.595	21.8	174.0	52.0	"
1095 First Ave.....	31st	"	Heavy trace	0.000	0.010	0.250	32.0	218.0	106.0	"
678 Potter Ave	31st	"	Large am't	0.007	0.008	0.170	12.2	144.0	78.0	"

The analyses made of Water from the several places indicated show the following result in 100,000 parts:

WELL WATER—September, 1898.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.	For Use,
886 3d St.....	2d	Large am,t	Large am't	0.011	0.014	0.185	11.5	94.0	15.0	Suspicious
1025 3d St.....	15th	"	"	0.003	0.015	0.210	5.1	106.0	56.0	Unfit.
1315 Booth St.....	15th	None	"	0.040	0.010	0.180	1.1	56.0	22.0	"
1350 11th St.....	22d	"	"	0.022	0.008	0.200	15.0	140.0	64.0	"
Soldiers' Home.....	23d	"	Trace	0.002	0.008	0.120	0.5	66.0	16.0	Usable.
Soldiers' Home.....	23d	"	None	None	0.010	0.150	0.6	58.0	16.0	"
1830 Brown St.....	26th	Large am't	"	0.016	0.016	0.250	23.1	154.0	62.0	Unfit.
973 Holton St	26th	"	Large am't	0.001	0.150	2.000	15.3	184.0	90.0	"
774 10th St.....	28th	None	Heavy trace	None	0.018	0.140	7.0	92.0	36.0	Suspicious
381 16th Ave.....	28th	Large am't	"	0.002	0.007	0.150	21.8	226.0	126.0	Unfit.
286 Burrell St	30th	"	Large am't	0.003	0.008	0.190	18.6	144.0	80.0	"
299 23d St.....	30th	"	"	0.002	.....	0.220	17.4	132.0	50.0	"

The analyses made of Water from the several places indicated show the following result in 100,000 parts:

WELL WATER—October, 1898.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.	For Use,
Court and 4th Sts....	5th	Large am't	Large am't	0.001	0.012	0.25	13.7	150.0	20.0	Unfit.
2602 Vliet St.....	14th	None	"	0.024	0.015	0.49	5.7	200.0	62.0	"
1520 Holton St.....	21st	"	None	0.080	0.014	0.54	2.3	44.0	24.0	"
Cawker Building	24th	"	"	0.030	0.003	0.08	2.2	72.0	20.0	Usable.
943 Louis Ave.....	31st	"	Trace	0.024	0.008	0.18	1.5	52.0	18.0	"

The analyses made of Water from the several places indicated show the following result in 100,000 parts:

WELL WATER—November, 1898.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.	For Use.
1015 Fratney St	2d	Large am't	Large am't	0.064	0.018	0.41	8.5	120.0	42.0	Unfit.
631 Tenth Ave	3d	"	None	0.094	0.076	1.58	17.2	134.0	46.0	"
970 Fratney St	7th	"	Large am't	0.002	0.010	0.30	13.3	118.0	56.0	"
1461 Ninth St.....	9th	"	"	0.017	0.020	0.36	16.3	100.0	44.0	"
916 Seventh Ave	10th	"	Trace	0.001	0.015	0.30	15.2	182.0	92.0	"
877 Bremen St	11th	"	Large am't	0.002	0.016	0.33	22.0	206.0	100.0	"
664 Fifteenth St.....	14th	"	None	En'm's am't	0.028	0.42	9.5	122.0	42.0	"
2202 Walnut St.....	14th	"	Large am't	0.010	0.006	2.18	20.0	152.0	76.0	"
1457 Ninth St.....	16th	"	Heavy trace	0.010	0.012	0.26	6.0	88.0	36.0	Suspicious
2302 Elm St	18th	"	None	0.001	0.013	0.20	5.8	110.0	40.0	"
1063 Twelfth Ave	22d	None	"	0.002	0.016	0.36	12.0	68.0	24.0	Unfit.
1065 Twelfth Ave	22d	"	"	Trace	0.002	0.20	0.7	220.0	50.0	Usable.
834 Arrow St.....	29th	Large am't	"	En'm's am't	0.031	0.80	11.0	88.0	44.0	Unfit.
1461 Ninth St.....	29th	"	Large am't	0.010	0.025	0.38	14.2	92.0	36.0	"

The analyses made of Water from the several places indicated show the following result in 100,000 parts:

WELL WATER—December, 1898.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine	Total Solids.	Loss on Ignition.	For Use.
1032 Seventh St	4th	None	None	0.010	0.009	0.11	1.3	26.0	16.0	Usable.
743 Eighth Ave	7th	Large am't	"	0.003	0.035	0.71	20.2	164.0	76.0	Unfit.
1117 Dousman St.....	13th	"	Large am't	0.008	0.012	0.39	13.0	162.0	82.0	"
802 Sixth Ave.....	13th	"	None	0.001	0.014	0.35	11.5	102.0	38.0	"
734 Third Ave.....	28th	"	Trace	0.003	0.007	0.20	3.3	48.0	14.0	Suspicious
Twelfth and Hibernia Sts	28th	"	Heavy trace	0.005	?	0.16	10.2	130.0	56.0	Unfit.
645 Scott St	28th	Heavy trace	Trace	0.004	0.005	0.14	4.5	74.0	22.0	Usable.

BACTERIA IN LAKE WATER.

March, 3d	81
9th	245
17th	3,858
23d	1,625
31st	348
April, 6th	1,426
20th	47
27th	69
May, 11th	1,339
18th	37
25th	274
June, 1st	208
8th	145
15th	87
July, 20th	300
27th	151
August, 3d	153
10th	205
17th	1,540
24th	221
31st	Liq
September, 15th	188
21st	330
28th	80
October, 5th	715
12th	617
19th	Liq
November, 2d	376
9th	227
16th	464
23d	258
30th	288
December, 28th	681

TABLE No. 4.

SPECIAL CHEMICAL ANALYSES.

Milk	6919
Cream	102
Lake Water	60
Well Water	150
Vinegar	6
Medicines	4
Ice	1
Urine	10
Stomach contents	5
Human Milk	4
Butter	1
Tea and Coffee	3
Meat	7
Flour	2
Sugar	1
Maple Syrup	1
Miscellaneous	38
	7,314

TABLE No. 5.

BACTERIOLOGICAL ANALYSES.

Diphtheria	47
Sputum	27
Water and Ice	44
Milk	1
Typhoid (serum)	16
Miscellaneous	10
	145

Respectfully submitted,

W. C. Bennett, M. D.,

Analyst.

REPORT OF THE CHIEF SANITARY INSPECTOR.

F. M. Schulz, M. D., Commissioner of Health:

DEAR SIR: — I have the honor to submit for your Annual Report the following detailed statement of the work done by the Sanitary Inspectors during the year ending April 17, 1899.

This report with the accompanying tables, gives the various kinds and numbers of the orders issued and served by the inspectors for the abatement of nuisances found.

The house to house inspections have been continued during the year. All premises have been visited once, and many several times.

The Inspectors have made 6541 complaints, 570 stable reports, 15 ice reports, 576 smoke reports, 116 smoke tests, and 12,401 reinspections. The Inspectors have also investigated 1,567 Citizens' Complaints. Of these 1,048 were verified either wholly or in part, the balance were either found groundless or the nuisance had been abated.

Based upon these reports, 7,131 orders were issued. All orders are made in duplicate. The original is served on the person who maintains a nuisance and the copy is kept on file with the Clerk and is made part of the record of the office.

The cutting and storing of ice for domestic and cooling purposes, has been carefully looked after. There was stored in the ice houses within the city 128,866 tons of ice, mostly for cooling purposes. The ice from inland lakes for domestic purposes is mostly brought in as it is wanted for delivery.

Officers in uniform have continued to attend funerals of those who died of contagious diseases and enforced the rule of the department that "such funerals must be strictly private." All cases of dipththeria and membraneous croup are

quarantined until reported recovered by the attending physician and the house is disinfected. In cases of small pox, the quarantine is maintained by one or more guards day and night until the quarantine is raised.

The weekly inspection of schools, both public and private, have been continued, and in addition the plumbing is inspected monthly by the Plumbing Inspector of this Department.

During the winter all cow barns are inspected at least once a month, and under the State Law and City Ordinance recently enacted we will be able to enforce a much better sanitary condition.

During the year nine horses afflicted with glanders have been killed, their carcasses covered with a liberal quantity of quick lime and buried outside the limits of the city. The stables in which the horses so diseased have been housed were cleaned and disinfected under the supervision of the Health Department.

The city is divided into eleven sanitary districts with one sanitary inspector for each district, as follows:

Inspector No. 103—Harry Kiehl, District No. 1, comprising 10th and 20th wards.

Inspector No. 104—J. A. Osmunson, District No. 2, comprising 12 and 17th wards.

Inspector No. 105—J. F. Cunningham, District No. 3, comprising 1st and 18th Wards.

Inspector No. 106—Edward Seaman, District No. 4, comprising 11th and 14th wards.

Inspector No. 108—Walter Fremont, District No. 5, comprising 3d, 4th and 7th wards.

Inspector No. 109—T. H. Hannan, District No. 6, comprising 5th and 8th wards.

Inspector No. 110—F. Kruckenberg, District No. 7, comprising 6th, 13th and 21st wards.

Inspector No. 113—J. Campbell, District No. 8, comprising 2d, 15th and 16th wards.

Inspector No. 116—Oscar Klein, District No. 9, comprising 9th and 19th wards.

One District for the Inspection of Plumbing—

No. 112—P. J. King, Inspector.

One District for the inspection of bakeries, confectionery manufacturies, candy and cream stores—

No. 111—J. H. Schultz, Inspector.

Four Districts for the inspection of meat, food stuffs, vegetables and fruits as follows:

No. 121—F. J. Carney, Inspector, District No. 1. Packing houses, Stock yards and all of the West side west of Fifth Street.

No. 122—John Falbe, Inspector, District No. 2. Commission houses and all of the South side.

No. 123—Phil. Stock, Inspector, District No. 3. All of the East side and that portion of the West east of Fifth Street.

Inspectors Harry Kiehl and J. F. Cunningham are detailed to collect milk samples for inspection.

Inspectors J. Campbell and Walter Fremont are detailed to pay particular attention to the enforcement of the smoke ordinance.

ORDER PERTAINING TO BAKERIES.

Clean bake shop	19
Clean floor	6
Clean pans, troughs or rising cloths	19
Clean rising boards or tables	3
Clean store room	1
Clean wagon box	3
Cease keeping flour in basement	1
Drain pit	1
Enclose or remove water closet	19
Keep door and windows open daily	1
Plaster bake shop	6
Provide cement or hardwood floor	74
Provide floor in flour room	1
Provide rack for flour	1
Remove bed from bake shop	1
Repair floor	5
Whitewash bake shop	47
Total	208

CONFECTIONARIES.

Clean confectionary	9
Cease using starch from floor	2
Cease sleeping in confectionary	1
Total	12

BUTCHER SHOPS.

Clean butcher shop	1
Clean butcher's offal from yard	1
Provide condensers	2
Total	4

ORDER PERTAINING TO BARNS.

Cease feeding slops to cows	1
Clean barns	15
Clean cows	37
Clean cow yard and tank	3
Clean under barn floor	1
Connect cow barn to sewer	9
Connect cow barn to tank	6
Discontinue to stable cows	1
Extend ventilation shaft	1
Provide more windows	1
Provide new floor for stable	1
Remove drain from barn	1
Repair barn	1
Straighten gutter	1
Ventilate cow and livery barn	11
Total	90

ORDERS PERTAINING TO PLUMBING, ETC.

a.

Provide sewer	136
Extend sewer	4
Repair and relay sewer	81
Clean sewer	53
Seal sewer	15
Trap sewer	2
Connect bar sink	1
Connect cistern	8
Connect exhaust pipe	1
Connect hydrant	1
Connect ice box	3
Connect roof conductors	19
Connect sink	24
Connect well	2
Provide strainers to tannery sewer	12
Total	362

b.

Clean sink waste pipe	6
Disconnect sink	2
Repair sink	11
Repair sink waste pipe	12
Repair sink trap	11
Trap sink	40
Trap and ventilate sink	2
Ventilate sink	3
Total	87

c.

Clean slop hopper	6
Connect slop hopper	2
Provide slop hopper	10
Remove slop hopper	7
Repair slop hopper	2
Trap slop hopper	1
Total	28

d

Clean water closet	66
Extend vent pipe	5
Provide water closet	96
Provide water for water closet	26
Remove pan closet	7
Renew water closet	2
Repair water closet	69
Repair soil pipe	14
Repair vent pipe	1
Repair vent to water closet	6
Ventilate water closet	1
Total	293

e.

Connect catch basin	1
Clean catch basin	9
Cover catch basin	2
Lower catch basin	1
Provide catch basin	15
Repair catch basin	3
Repair catch basin trap	1
Remove catch basin	1
Trap catch basin	6
Total	39

f.

Provide water	7
Repair hydrant	2
Repair laundry trays	2
Repair leak in gas pipe	1
Repair leak in ice box waste pipe	1
Repair plumbing	24
Repair vent pipe	12
Repair water pipe	8
Repair waste pipe	9
Trap wash basin	1
Turn on water	1
Total	68

II.—ORDERS PERTAINING TO VAULTS AND URINALS.

a.

Bank vault	3
Clean vault	2894
Disconnect vault from sewer	7
Disinfect vault	100
Fill vault	149
Provide water tight vault	124
Remove vault	20
Remove vault from lot line	40
Repair vault	11
Total	3348

b.

Clean urinal	4
Connect urinal	7
Line urinal	1
Provide urinal	10
Provide water for urinal	6
Remove urinal	3
Renew urinal	2
Repair urinal	6
Total	39

III.—ORDERS PERTAINING TO GARBAGE AND MANURE NUISANCES.

a.

Provide garbage box	176
Provide garbage room	1
Provide garbage chute	2
Provide cover for garbage box	11
Provide ash box	63
Clean garbage box	3
Clean garbage chute	2
Disinfect garbage box	3
Remove garbage box	6
Remove mixed garbage	40
Remove rats	2
Total	309

b.

Provide manure box	136
Provide cover for manure box	10
Clean and fill manure pit	2
Remove manure	155
Remove manure box	4
Repair manure box	2
Total	309

ORDER TO CEASE COMMITTING NUISANCE.

Cease allowing coal gas to escape	1
Cease burning manure and hair	4
Cease draining fish barrel in basement	1
Cease draining slops to alley or street gutter	9
Cease draining slops on lot	1
Cease drying rags	1
Cease drying grains	1
Cease keeping ducks	1
Cease running liquid manure to alley	2
Cease selling decayed nuts	4
Cease throwing slops in catch basin	1
Cease throwing slops and waste water in alley	12
Cease throwing garbage in alley	9
Cease throwing garbage in yard	3
Cease throwing chamber slops	4
Cease throwing manure in alley	1
Cease throwing rubbish in alley	5
Cease throwing slops in yard	6
Cease using fence or sidewalk for urinal	2
Cease using iron pipe	1
Cease using imitation water closet	1
Cease using shed for water closet	1
Cease using vault	1
Cease using wooden drain	1
Total	73

MISCELLANEOUS ORDERS.

Boil water before using	26
Citizens' complaints made	1567
Citizens' complaints dismissed	519
Clean alley	11
Clean and fill cistern	26
Clean and lock house or shed	9
Clean basement cellar and premises	30
Clean cistern	9
Clean dry well	2
Clean Grocery store	1
Clean and repair eave gutters and conductors	23
Clean pen for poultry	9
Clean well	5
Clean wooden drain	1
Clean yard	49
Close cellar door	1
Confine chickens	1
Cover cistern	14
Disconnect wooden drain	1
Disinfect basement	1
Drain basement and cellar	7
Extend chimney	5
Extend drain	1
Extend cistern overflow	1
Fill or cover cellar	1
Fill or drain lot	14
Fill well	112
Provide eave gutters for house or barn	5
Provide dry well	1
Referred to Board of Public Works	121
Remove bones	1
Remove contaminated earth	1
Remove carloads of onions	3
Remove high board fence	1
Remove hoof parings	1
Remove hogs	2
Remove horse or cow from yard	3
Remove mattresses	1
Remove night soil	4
Remove offensive barrels	1
Remove paints and varnish	1
Remove poultry	26
Remove poultry coop	6
Remove privy from sewer	2
Remove rags from under house	1

Remove rubbish and ashes	49
Remove scavenger wagon from shed	1
Remove stagnant water	1
Remove street cleanings from lot	1
Remove tree	1
Remove twenty-two dead horses	1
Remove wooden drain	12
Renew smoke stack	1
Remove ventilating flues and box them	1
Remove woodwork around water closet	1
Repair basement	5
Repair cellar door	1
Repair cistern	6
Repair or remove porch	1
Repair privy	18
Repair roof	4
Unlock water closet	1

Respectfully submitted,

T. H. CURTIS,

Chief Sanitary Inspector.

REPORT OF SUPERINTENDENT OF COLLECTION AND DISPOSAL OF GARBAGE.

F. M. Schulz, Commissioner of Health.

SIR: The following is the report of the work done in the collection and disposal of garbage during the year beginning January 1st, and ending December 31st, 1898.

My appointment to the office of superintendent of the collection and disposal of garbage, took effect May 1st, 1898, but in order to make the report complete I include figures showing the work done from the first of the year to the date of my appointment. When I took charge of this work I continued to dispose of the garbage in the manner adopted by my predecessor, and on the same premises except that instead of simply depositing the garbage in the furrow left by the plow to be covered by the ground from the next furrow, I ordered that it be deposited in ditches twenty-four inches wide, which allows a more effectual covering and prevents all stench.

The distance from the populous part of the city to the dumping grounds being considerable, you, on my recommendation, leased a tract of ground on Richard street just beyond the city limits which we used several weeks for that purpose, but owing to the trouble and annoyance the teamsters were made subject to by the authorities of the Town of Milwaukee,

we ceased to deposit garbage there. Several of the teamsters were arrested and subjected to a trial before the Justice of the Peace of said town and convicted to a fine. The matter was appealed and the teamster was liberated on a writ of habeas corpus.

The question whether the department has the right to dump garbage in the towns adjoining the city when the Board of Health of the town declares the dumping of garbage a nuirance, has not been adjudicated.

On the advent of winter when the extreme cold weather made it practically impossible to bury garbage on the premises that we had been using, you directed that the garbage be disposed of in the Menominee Valley, west of the Sixteenth Street Viaduct, to be covered with refuse and ashes collected throughout the city. Many of our citizens became alarmed at the action of the Health Department in depositing the garbage within the city limits, and a petition addressed to the Common Council, which was referred to the Committee on Health, asking that the Commissioner of Health seek some other place to deposit garbage, caused the Committee on Health together with the local committees of the Eighth and Sixteenth wards to inspect this dump, but they came to no decided conclusion whether the dumping of garbage would be inimical to the health and comfort of the city.

They seemed to be quite unanimous in the opinion that it would cause no nuisance during the cold weather, but some of them seemed to think that on the advent of warmer weather the gases arising from the decomposition of this garbage, would penetrate through the covering and would cause a stench. Events have proved their fears groundless. On the coming of warmer weather the garbage was again taken to the Zillmer and Hildebrand farms.

Following is a table showing the number of single teams, double teams, helpers and laborers employed in the collection and disposal of garbage during the various months of the

year, with the number of loads and tons of garbage collected and disposed of:

1898.	Single Teams.	Double Teams.	Helpers.	Laborers.	No. of Single Loads.	No. of Double Loads.	No. of Tons.	*No. of Large Dead Animals.	†No. of Small Dead Animals.
January....	44	10	7	11	1,889	216½	1,926	37	215
February ..	45	10	6	11	1,624	240	1,710	33	138
March.....	45	11	6	11	2,149	267	2,278	43	278
April.....	44	10	9	8	2,083	287	2,284	50	324
May	45	6	6	8	2,241	128	2 000	38	397
June.....	51	12	12	19	2,308	411	2,758	25	317
July.....	57	12	12	17	2,592	325	2,742	44	377
August.....	54	12	12	18	2,814	339	2,957	35	415
September.	54	14	14	16	2,727	361	2,849	28	292
October	54	13	13	17	2,382	357	2,678	16	220
November .	52	13	13	16	1,878	322	2,214	19	556
December..	53	13	13	17	2,076	305	2,320	39	237
Total ...	.....	.....	.....	.....	26,763	3,558	28,716	412	3,766

*Horses, etc.
†Dogs, cats, etc.

Respectfully submitted,

JAS. GRAHAM,

Sup't Collection and Disposal of Garbage.

REPORT OF SECRETARY.

F. M. Schulz, M. D., Commissioner of Health:

SIR:—An abstract of business done in the Health Department in 1898 shows an increase of 50 per cent in complaints entered over the previous year, viz: 6,339 against 4,266, and consequent increase of orders issued. It is remarkable that citizens' complaints although having increased from 814 to 1,540 (90 per cent) the percentage of unfounded complaints is just the same. One-third had to be dismissed after inspection, without further action—personal spite often prompts a party to complain of his neighbor, and puts this department to useless work.

District inspectors, of which there are ten, go from house to house, and report every morning the nuisances found, whereupon the Chief directs the kind of order necessary to abate such nuisance, said orders being written out in duplicate by the clerk and served by the inspectors the following day. In this manner the city is pretty well cleaned up, and we are always ready for new business, which is not lacking.

Those matters pertaining to public buildings, streets, alleys, etc., are referred to the Board of Public Works for action. One hundred and twenty-one such references were made during the year, embracing streets, alleys, schools, sewers, etc., and most defects were remedied, so that at the present time only fourteen school houses of the fifty-three reported remain in an unsanitary state.

The inspectors make reports every week of all public and private schools, and their reports show that the public schools were visited 1,032 times, and 123 defects were found in twenty different schools.

For abatement of nuisances on private property 2416 general orders were issued and 2040 obeyed, or more than 80 per cent.

Of 2894 vault orders only 122, or 4 per cent, remain unsatisfied on the books, while 80 of the 135 sewer orders, or 59 per cent, were not complied with, mostly by poor people.

Of 148 examinations of well water by the Chemist, 116 samples were found unfit for domestic purposes, and consequently the wells were ordered filled, which orders were complied with in all but 36 cases, in most of which the city water pipes were not yet provided, and the parties were ordered to boil the water before using. In six cases, besides the eighty-six above mentioned, they were allowed to use the water after having boiled it for thirty minutes.

The milk analysis will be reported by the chemist direct as well as the prosecutions for non-compliance with the milk ordinance.

The ordinances were amended during the year, viz., the privy vault ordinance on August 1st and the smoke ordinance on August 1st, last.

Under the smoke ordinance 215 orders were issued to different establishments to provide their chimneys with smoke consumers, of which 116 have been practically complied with and 33 of the proprietors have sent replies of their willingness to comply with the orders. The names of fourteen of the others have been handed over to the City Attorney for prosecution.

Eighteen thousand two hundred and sixty-five inspections were made by the regular force, consisting in the bulk of 6195 first complaints; 5712 of reinspections, which reinspection is done after expiration of the time given in the general vault or

sewer order, which time is from two to ten days; and 6310 vaults inspected after having been cleaned, that being the number of permits issued during the year to the thirty-four licensed scavengers working forty-two teams (two licenses of scavengers working three teams were revoked two months ago for non-compliance with the rules). The gross amount of night soil reported removed by scavengers is 15,671 yards, or two and forty-seven-hundredths yards for each permit issued, and the sum paid by citizens for the work is $47,013.00. Of this amount $30,429.00 was paid out for vaults cleaned in districts not included in the limits where vaults can be maintained under the law, while $16,584.00 were expended by citizens where no vaults are allowed to be built, which shows conclusively that the law should be amended so as to lessen the expense the old houses without water-closets cause the owner by having the expense of cleaning vault every year, if not oftener, on becoming a nuisance, instead of expending it once for a water-closet and improve his property and its sanitary condition. An attempt was made last year to have the privilege, where vaults may be maintained, cease with the building of sewers and laying of water pipes, but it failed to pass, which is to be regretted, but hopes are entertained that it may become a law this year.

Besides the work related as being done in routine there are three meat inspectors who reported 158 confiscations of meat and fish, weighing 17,360 pounds, valued at $1,089.50, and twenty-eight confiscations of fruit and vegetables worth $114.15 and weighing 9,828 pounds, besides a quantity of cheese and flour.

Five diseased cows and nine glandered horses were killed. Of the other matters of record, the bakeries inspected numbered 319, of which 268 were visited by a special inspector in June, July and August, and reinspected in November and December. Besides the additional fifty-one bakeries and confectionaries found in existence at the last inspection, numerous small candy kitchens were visited, which were run before

Christmas, and occupants received verbal orders to do whatever was necessary in improving sanitary conditions. Eighty-five bakeries and confectionaries were found defective in this respect, and orders were issued in each case for improvements, mostly for renewing, whitewashing or enclosing water closets in close proximity to shops, in accordance with City Ordinance 131, passed on August 17th, 1896, and State Laws of 1897, Chapter 375, a copy of which was left with each baker and confectioner at the first visit, and over 90 per cent have cheerfully complied with the orders.

Plumbing inspections by peppermint test for escaping sewer gas were made upon 297 complaints, and in most cases interested parties were willing to repair the defects upon being advised of their existence, and only in twenty was it necessary to issue written notices, which have been complied with to the extent of 80 per cent.

Eighty-two cow stables within the city limits were visited during the spring and fall of this year, and fifteen were found in bad condition, and the owners received orders accordingly.

In addition to 646 call notices sent out during the year to owners or occupants of unsanitary premises, for conferences with the commissioner about improvements, which were generally made, an inspector was detailed to placard 338 houses where diphtheria existed, and 132 where there were cases of scarlet fever, and also served quarantine notices.

The chief disinfector fumigated 886 rooms in 443 different localities.

The following is a statement of receipts and expenditures of the Health Department for the year beginning January 1, 1898, and ending December 31, 1898:

RECEIPTS.

BALANCE	$1,656.23
City Order—E. W. Diercks, audited January 4, 1897, was disallowed April 4, 1897	211 50
Feb. 14—79 iron beds at $1.25 sold at Isolation Hospital	98 75
Mar. 28—Bedding sold at Isolation Hospital	45 00
Apr. 14—Three boxes anti-toxine	7 50
May 11—Bedding sold at Isolation Hospital	64 60
May 13—Bedding and furniture sold at Isolation Hospital	60 00
May 13— " " " " " "	70 00
May 16— " " " " " "	15 00
May 18— " " " " " "	20 35
June 17—Payroll, March 19 to April 20	506 00
June 21—City order	5 00
Aug. 1—Linens sold at Isolation Hospital	1 50
Oct. 1—Amount unpaid payroll for garbage	4 50
Nov. 1—Stove sold at Isolation Hospital	1 50
Dec. 1—1898 Tax Levy	90,000 00
Jan. 11, 1899—Scrap iron sold at Isolation Hospital	18 25
Total	$92,785 68

DISBURSEMENTS.

JANUARY 31.

Milk confiscated	$ 19 50
Postage stamps	10 00
Supplies	7 11
Ice	29 00
Wagon repairs, garbage disposal	21 00

FEBRUARY 1.

January pay roll	2,088 23
January pay roll, Hospital	86 66
January pay roll, repairs	12 22

FEBRUARY 14.

Printing	8 50
Supplies and miscellaneous	72 72
Farm rent, Matthews, Aug. 26 to Jan. 20, 1899, garbage disposal	75 00
Coal	78 15
Milk	3 65
Groceries	13 72
Lumber	13 82
Telephone service, first quarter	55 75
Tools, etc., garbage disposal	12 06

FEBRUARY 28.

Pay roll, garbage disposal, Dec. 20 to Jan. 19	4,042 44
Farm rent, Hildebrandt, garbage disposal, Dec. 20 to Jan. 19	150 00
Farm rent, Zillmer, garbage disposal, Dec. 20 to Jan. 19	71 25
Supplies and miscellaneous	131 15
Postage stamps	10 00
Meat	45 27
Groceries	3 22
Supplies, garbage disposal	55

MARCH 1.

February pay roll	2,088 23
February pay roll, Hospital	86 66

MARCH 14.

Supplies and miscellaneous	51 37
Coal	62 52
Milk	3 40
Groceries	20 63
Postage stamps	10 00
Typewriter	97 50
Printing	29 00

MARCH 23.

Pay roll, garbage disposal, Jan. 20 to Feb. 19	4,112 31
Farm rent, Hildebrandt, Jan. 20 to Feb. 19	150 00
Farm rent, Zillmer, Jan. 20 to Feb. 19	63 00

APRIL 1.

March pay roll	2,088 23
March pay roll, Hospital	86 66

APRIL 11.

Supplies and miscellaneous	85 66
Printing	14 00
Gas lighting, first quarter	4 64
Meats	51 04
Milk	6 45
Groceries	18 31
Lumber, garbage disposal	64 91
Supplies, etc., garbage disposal	4 00
Ice	5 00

APRIL 20.

April pay roll, nineteen days	1,331 35
April pay roll, Hospital, nineteen days	54 87

APRIL 25.

Supplies	1 50
Postage stamps and envelopes	53 60
Printing	18 00

MAY 1.

April pay roll, eleven days	790 20
April pay roll, Hospital, eleven days	31 78

MAY 9.

Supplies, etc., garbage disposal	5 00
Postal cards	20 00
Milk	3 05
Supplies	83 00
Groceries	17 11
Books and stationery	26 50

MAY 23.

Pay roll garbage disposal, March 19 to April 20	4,722 34
Farm rent, Hildebrandt, garbage disposal, Nov. 24 to Dec. 19.	43 16
Supplies, etc., garbage disposal	8 20
Farm rent, Hildebrandt, garbage disposal, Feb. 20 to March 19	150 00
Farm rent, Zillmer, garbage disposal, Feb. 20 to March 19	68 00
Printing	527 70
Meats	18 68
Coal	21 63
Postage stamps	11 00
Supplies and miscellaneous	76 87

JUNE 1.

May pay roll	1,904 89
May pay roll, hospital	86 66

JUNE 6.

Printing	66 50
Postage stamps	4 00
Groceries	3 85
Books and stationery	12 00
Pay roll, garbage disposal, April 21 to May 31	5,549 23
Pay roll, garbage disposal, Feb. 20 to March 19	3,732 40
Farm rent, Hildebrandt, garbage disposal, March 20 to April 20	100 00
Farm rent, Hildebrandt, garbage disposal, April 21 to May 19	100 00
Supplies, etc	13 19

JUNE 10.

May pay roll	150 00

JUNE 20.

Supplies, etc., garbage disposal	46 70
Supplies and miscellaneous	39 15
Meats	5 77
Milk	4 45
Groceries	17 59
Postage stamps	10 00

JULY 1.

June pay roll	1,994 90
June pay roll, hospital	86 66
June pay roll, work at hospital	4 38

JULY 5.

Printing	115 10
Supplies, etc., garbage disposal	90 00
Postage stamps	3 00
Telephone service, second quarter	55 25
Farm rent, Zillmer, March 20 to April 19	73 00
Pay roll, garbage disposal, April 20 to June 1	130 00
Pay roll, garbage disposal, June 1 to June 30	4,543 11
Supplies and miscellaneous	24 96

JUNE 18.

Time keeper, omitted from pay roll, garbage disposal, June 1 to June 6	11 10
Supplies, etc., garbage disposal	46 00
Farm rent, Hildebrandt, garbage disposal, June 1 to June 30	100 00
Time keeper, omitted from pay roll, April 20 to April 26	13 32
Farm rent, Zillmer, garbage disposal, April 20 to May 31	89 00
Farm rent, Zillmer, garbage disposal, June 1 to June 30	71 95
Groceries	6 60
Supplies	18 49

AUGUST 1.

Gas lighting, second quarter	5 28
Supplies and miscellaneous	43 75
Groceries	6 28
Printing	6 05
Supplies, etc., garbage disposal	161 50
Milk	3 65
Postage stamps	10 00
Ice	5 00
Farm rent, Hildebrandt, garbage disposal, May 1 to May 31	33 33

AUGUST 1.

July pay roll	2,088 23
July pay roll, hospital	86 66
May pay roll	100 00
June pay roll	100 00

AUGUST 15.

Pay roll, garbage disposal, July 1 to July 31	5,204 82
Supplies, etc., garbage disposal	83 83
Farm rent, Hildebrandt, garbage disposal, July 1 to July 31	100 00
Supplies and miscellaneous	100 80
Groceries	22 62
Milk	5 15
Printing	56 50

AUGUST 29.

Supplies, etc., garbage disposal	42 00
Supplies and miscellaneous	14 20
Printing	16 00

SEPTEMBER 1.

August pay roll	2,027 62
August pay roll, hospital	86 66

SEPTEMBER 12.

Groceries	21 11
Farm rent, Hildebrandt, garbage disposal, Aug. 1 to Aug. 31	100 00
Farm rent, Zillmer, garbage disposal, Aug 1 to Aug. 31	67 40
Farm rent, Zillmer, garbage disposal July 1 to July 31	74 30
Pay roll, garbage disposal, Aug. 1 to Aug. 31	5,816 26
Supplies, etc., garbage disposal	90 15
Inspector, omitted from pay roll, garbage disposal, July 25 to 31	13 32
Supplies and miscellaneous	99 31
Milk	4 30
Telephone service	55 00

OCTOBER 1.

September pay roll	2,079 91
September pay roll, Hospital	86 66
September pay roll, Hospital	15 00
September pay roll, repairs	10 63

OCTOBER 10.

Printing	59 10
Supplies	75
Farm rent, Hildebrandt, garbage disposal, Sept. 1 to Sept. 30	100 00
Farm rent, Sherman, garbage disposal, July 23 to Sept. 23	200 00
Pay roll, garbage disposal, Sept. 1 to Sept. 30	5,756 69

OCTOBER 24.

Postage stamps	10 05
Gas lighting, third quarter	3 76
Supplies and miscellaneous	19 06
Groceries	22 89
Coal	114 62
Milk	3 90

OCTOBER 24.

Printing	76 10
Supplies, etc., garbage disposal	58 20
Superintendent, omitted from garbage disposal pay roll, April 20 to May 1	8 61
Services, omitted from garbage disposal pay roll, April 21 to 30	11 25

NOVEMBER 1.

October pay roll	2,157 32
October pay roll, Hospital	86 66

NOVEMBER 21.

Pay roll, garbage disposal, Oct. 1 to 31	5,201 62
Supplies, etc., garbage disposal	13 65
Farm rent, Hildebrandt, garbage disposal, Oct. 1 to Oct. 31	100 00
Farm rent, Sherman, garbage disposal, Sept. 23 to Oct. 31	62 13
Farm rent, Zillmer, garbage disposal, add to bill of August	15 35
Farm rent, Zillmer, garbage disposal, Sept. 1 to Sept. 30	78 87
Farm rent, Zillmer, garbage disposal, Oct. 1 to Oct. 31	70 62
Supplies and miscellaneous	88 72
Postage and internal revenue stamps	52 47
Groceries	29 34
Books and stationery	3 75

DECEMBER 1.

November pay roll	2,208 79
November pay roll, Hospital	86 66
November pay roll, repairs	14 06

DECEMBER 5.

Supplies and miscellaneous	7 04
Printing	53 50
Coal	50 00
Pay roll, garbage disposal, Nov. 1 to Nov. 30	4,530 84
Supplies, garbage disposal	1 65

DECEMBER 19.

Plowing under and damage to rye, garbage disposal, May and June	116 00
Supplies, etc., garbage disposal	51 00
Farm rent, Hildebrandt, garbage disposal, November 1 to November 30	100 00
Farm rent, Zillmer, garbage disposal, November 1 to November 30	57 97
Collecting garbage, omitted from pay roll, garbage disposal, November 1 to November 30	40 00
Collecting garbage, omitted from pay roll, garbage disposal, October and November	16 00
Supplies and material	35 25
Groceries	8 59
Meat	38 63
Milk	3 70
Telephone service, fourth quarter	55 00

DECEMBER 31.

December pay roll	2,213 23
December pay roll, hospital	86 66

JANUARY 3, 1899.

Coal	22 35
Pay roll, garbage disposal, December 1 to December 31	4,786 94

JANUARY 25.

Supplies and miscellaneous	159 26
Groceries	25 06
Coal	44 70
Printing	34 00
Meat	4 46
Gas lighting, fourth quarter	3 36
Milk	8 00
Ice	34 00
Postage stamps	9 00
Supplies, etc., garbage disposal	32 68
Farm rent, Hildebrandt, garbage disposal, December 1 to December 31	150 00
Farm rent, Zillmer, garbage disposal, Dec. 1 to Dec. 31	58 37
Stationery	83 58
Total	$92,250 32

DISBURSEMENTS FOR OFFICE.

Pay rolls	$25,411 13	
Stamps, envelopes and cards	213 12	
Anti-toxine	250 26	
Printing	1,080 05	
Stationery	125 83	
Telephone	116 00	
Lumber	13 82	
		$27,210 21

DISBURSEMENTS FOR LABORATORY.

Supplies and miscellaneous	$1,040 05	
Ice	49 00	
Gas	17 04	
		$1,106 09

DISBURSEMENTS FOR ISOLATED HOSPITAL.

Pay rolls	$1,054 91	
Pay rolls, repairs, etc	41 29	
Milk	49 70	
Groceries	236 92	
Meat	163 85	
Ice	24 00	
Coal	393 97	
Telephone services	105 00	
		$2,069 64

DISBURSEMENTS FOR COLLECTION AND DISPOSAL OF GARBAGE.

Pay rolls	$57,736 60	
Farm rent	2,672 70	
Supplies and tools	949 08	
	61,358 38	
Amount not paid by City Treasurer of pay roll March 19 to April 20	506 00	
		$61,864 38
		$92,250 32
Total receipts	$92,785 68	
Total disbursements	92,250 32	
Total balance	$535 36	

Respectfully submitted,

FRANK B. SCHUTZ,

Secretary.

REPORT

OF THE

COMMISSIONER OF HEALTH

OF

MILWAUKEE.

(TWENTY-THIRD ANNUAL REPORT OF THE DEPARTMENT.)

APRIL, 1900.

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WESTLAKE, DELAHUNT & SMITH COMPANY,
PRINTERS.
For the H. H. WEST CO., City Contractors.
1900.

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1900.

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OFFICERS AND EMPLOYES

OF THE

Health Department of the City of Milwaukee

For the Year Ending April 17th, 1900.

Commissioner of Health,

F. M. SCHULZ, PH. G. M. D.

Medical Assistants to Commissioner of Health,

ARTHUR J. PATEK, M. D., LOUIS F. JERMAIN, M. D.,
GILBERT E. SEAMAN, M. D.,
CHARLES J. COFFEY, M. D., JAMES H. HACKETT, M. D.,

Food Analyst,

W. C. BENNETT, M. D.

Registrar of Vital Statistics,

JOHN W. COON, M. D.

Secretary,

FRANK B. SCHUTZ.

Clerk,

E. W. DIERCKS.

Registration Clerk,

MISS BELLE REESE.

Confidential Secretary,

MISS HELEN WILSON.

Stenographer.

MISS N. H. TAYLOR.

OFFICERS AND EMPLOYES—Continued.

Sanitary Police,

T. H. Curtis, Chief Sanitary Inspector.
David Thomas, Chief of Disinfecting Corps.
G. E. Adams, Garbage Inspector.
F. J. Carney, Meat Inspector.
F. Falbe, Meat Inspector.
Phil. Stock, Meat Inspector.
Ed. McGrath, Meat Inspector.

H. Keihl,
J. O. Osmunson.
J. F. Cunningham.
E. Seaman.
W. Fremont.
C. F. Kruckenberg.
Jacob H. Schulz.
P. J. King.
J. Campbell.
O. E. Klein.
T. Boutin.
John Dolge.

Matron to City Isolation Hospital for Contagious Diseases,

Miss J. C. Weihrman.

Cook to City Isolation Hospital,

Sarah Haisler.

Janitor to City Isolation Hospital,

Mike Haisler.

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COMMITTEE ON HEALTH

OF THE

BOARD OF ALDERMEN.

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P. J. Grogan.

J. Maciolek.

Wm. Murphy.

W. H. Graebner.

Arthur A. McCormack.

Henry Laack.

REPORT.

To the Honorable the Mayor and Common Council of the City of Milwaukee:

GENTLEMEN:—

I have the honor to transmit herewith the Annual Report of the Health Department for the year ending April 17, 1900, being the Twenty-third Annual Report of this department.

During the year 1899 there was recorded in this department 7,544 births, of which 3,897 were males and 3,647 were females, the total number of births being 239 less than during the year 1898.

The total number of deaths reported during the year 1899 was 3,843, representing an annual death rate of 13.48 per 1,000 population, upon an estimated population of 285,000; of this number 2,065 were males and 1,778 were females.

The deaths of children under one year of age numbered 1,113, as against 1,010 for 1898, and for children from one to five years of age 428, as against 336 for 1898. The total deaths of children under five years of age numbered 1,541, as against 1,346 for 1898, an increase of 195 deaths.

The increase in the number of deaths among children was due to the prevalency during the year 1899 of diseases peculiar to infant life, viz.: Scarlet fever, diphtheria, measles and diarrhoeal diseases.

The following table shows the comparative number of deaths from the five leading diseases among children below ten years of age.

	1898	1899	Increase.
Measles	2	26	24
Scarlet Fever	2	35	33
Diphtheria	54	98	44
Other Epidemic Diseases	4	23	19
Diarrhoeal Diseases	332	386	54
	394	568	174

Among other diseases showing an increased mortality for 1899, as compared with the preceding year, the following may be mentioned:

	1898	1899
Pulmonary Tuberculosis	316	372
Cancer	166	194
Meningitis	108	123
Heart Disease	134	228
Pneumonia	227	286
Appendicitis	53	68
Nephritis	106	132
Congenital Debility	194	244

The increase in the mortality rate for the year 1899 has been universal and can only be attributed to the unusual climatic conditions that prevailed during the past year. The records of the weather bureau show that during 1899 we had to contend with the dryest and wettest, the hottest and coldest seasons of all corresponding seasons during a period of twenty-five years past. Similar conditions were noted elsewhere, and in nearly all the larger cities of this country the epidemic prevalence of many of the contagious diseases has affected the public health in general.

SCARLET FEVER.

Scarlet fever was present in epidemic form during the year, 1,100 cases of this disease being reported, with 36 deaths.

The department experienced considerable difficulty in controlling the spread of this disease; first, because of the large number of mild cases that were either not reported or not recognized and that frequented the schools and public places; and second, inspection of children in schools demonstrated the fact that frequently cases were reported recovered and allowed to attend school before desquamation and other sources of contagion had ceased to exist.

In view of these facts the department determined upon an increase of the time of quarantine to thirty days.

This increase in the time of quarantine was attended with gratifying results, as the number of cases immediately began to decrease and fewer unrecovered cases were found in the schools.

DIPHTHERIA.

During the year 722 cases of diphtheria were reported, with 109 deaths, a percentage of 13.7; this being the lowest percentage of deaths from diphtheria since 1891. In 1892 the percentage of deaths was 33.5; in 1893, 33.7; in 1894, 37.8; in 1895, 30.0; in 1896, 21.5; in 1897, 19.6; and in 1898, 17.7.

This steady decline in the death rate of diphtheria must be attributed mainly to the more general use of antitoxine; for since 1895, when the use of antitoxine became general, the death rate has fallen over one-half.

MEASLES.

During the year 312 cases of measles were reported, with 26 deaths, a percentage of 8.3.

SMALL-POX.

During the period covered by this report there occurred 14 cases of small-pox in the city, with three deaths.

CASE NO.	DATE.	NAME.	AGE.	ADDRESS.	WHERE TREATED.	RESULT.
1	Apr. 17	Albert Gross	20	590 Lincoln Ave	Home	Recovery.
2	" 24	Theo. Gross, Jr.	17	590 Lincoln Ave	Hospital	Recovery.
3	" 25	Theo. Gross, Sr.	55	590 Lincoln Av. up stairs	Hospital	Death.
4	" 25	Theo. Gross, Jr. 2.	20	590 Lincoln Av. up stairs	Hospital	Recovery.
5	" 25	Annie Gross	25	637 1st Ave	Hospital	Recovery.
6	May 3	Franz Hoge	58	1018 Windlake Ave	Hospital	Recovery.
7	" 11	Albert Gross	1	762 11th Ave	Hospital	Recovery.
8	" 11	Chas. Gross	28	762 11th Ave	Hospital	Recovery.
9	" 19	Dr. Stoddard	30	12th and Vliet	Hospital	Recovery.
10	" 21	Louis Groth	42	332 17th Ave	Hospital	Recovery.
11	" 24	Hubert Ramsdell	42	949 Washington	Home	Death.
12	June 7	Wm. Rolfson	30	623 Grand Ave	Hospital	Recovery.
13	" 11	J. N. Westermann.	42	461 Milwaukee	Hospital	Recovery.
14	" 19	Hattie Bunker	36	951 Washington	Home	Death.

The first case that occurred was that of Albert Gross, of 590 Lincoln avenue. The source of contagion was unknown, and the case was diagnosed as chicken-pox.

On April 24, seven days later, Theo. Gross, Jr., a brother of Albert Gross, was taken sick and the department notified of the case, which proved to be variola. Case number 3 was an uncle of case number 1, and living in the same house, up-stairs. This man died

shortly after admission to the hospital. Cases 4 and 5 occurred in the persons of Theo. Gross, Jr., and Annie Gross; the former a son of case number 3, and the latter a sister-in-law of case number 1. The sixth case was Franz Hoge, who had visited the Gross family at 590 Lincoln avenue before the true nature of the disease was determined. Cases 7 and 8 were Charles Gross, brother of case number 1, and his son Albert.

Case number 9, Dr. Stoddard, who visited small-pox cases at the hospital, and in that manner contracted a mild form of varioloid; upon recovery he remained at the hospital as resident physician.

It will be seen that all of the above cases are traceable to case number 1.

On May 24, Hubert W. Ramsdell died after an illness of one week. Cause of death was given as purpura hemorrhagica, and the body was shipped to New England for interment. On June 7, William Rolfson was taken sick with small-pox, and an investigation as to source of contagion disclosed the fact that he sat up with the corpse of Hubert W. Ramsdell the night after death.

Case number 13 was the undertaker's assistant who prepared the body of case number 11 for shipment. This case was immediately placed under quarantine upon determining that case number 11 was small-pox.

Case number 14 lived in the upper flat of the house in which case number 11 occurred, and had helped to take care of him during his illness. This also was of the hemorrhagic variety, and patient died within twenty-four hours of initial fever.

Case number 1 was employed at Gem Hammock & Fly Net factory, and the department, upon learning the nature of the case, immediately proceeded to vaccinate the entire force of employes. In like manner all persons who had been in contact with the sick, or who had visited their homes, were immediately vaccinated. A thorough disinfection of the premises and destruction of articles not easily disinfected was practiced in every case.

A public funeral was held in case number 11, at which a large number of his fellow workmen were present, and that many more cases did not occur was undoubtedly due to the fact that the under-

taker had thoroughly embalmed and placed the body in a hermetically sealed casket. In addition the attending physician, while not aware of the nature of the case, had yet ordered that no one go to the room occupied by the patient, that the bedding be burned and the room thoroughly disinfected. He also took the precaution to send the children of the family away from home early in the disease, and himself assisted the undertaker in preparing the body for shipment.

TYPHOID FEVER.

There is little to add to the general remarks made in last year's report on the matter of typhoid fever. What was mentioned in regard to the pollution of the water supply as the cause of the spread of this disease, and the conclusions drawn, namely: that all wells within the city limits ought to be abolished, holds equally good this year, and I have embodied these recommendations and commented upon them in the paragraph on water supply. The fact that of the 118 wells whose water was examined during the past year, only 16 contained usable water, goes to prove the necessity of reform. That the polluted well water bears some relation to the prevalence of typhoid fever there can be no doubt.

Some months ago there appeared an article in a daily paper which prophesied a scourge of typhoid fever in this community because of the method of garbage disposal. This attack was entirely unjustifiable, and was disproved by a report that emanated from this department. This stand was still further strengthened by future events, for there has been no actual increase in typhoid fever cases during the past year.

During 1898 there were 132 reported cases with 46 deaths, and during 1899 174 reported cases with 43 deaths. If we may follow the same reasoning as was employed in the last report, we must conclude that there could not have been a mortality of 25 per cent., and that taking 10 per cent. to be the average death rate there must have been about 430 cases in this city. Therefore, both mortality and morbidity are slightly less than during the previous year. So it is fair to assume that the disposition of the garbage has *not* caused a visitation of a typhoid fever epidemic upon this community.

I mention this matter not in a spirit of vindictiveness, but because such bold assertions—as the one referred to—published in the daily papers, have a decidedly bad influence upon the morals of a community, and make it keenly alive and sensitive to an imaginary and prospective danger that does not actually exist.

Be that as it may, there is no denying the fact that typhoid fever ought to be even less prevalent than it is, and we look forward to the abolition of wells as a factor that will contribute to that end.

TUBERCULOSIS.

In our last report attention was called to the advisability of the passage of laws regulating marriage. That the presentation of this matter was apropos was abundantly proven by the favorable reception it received in various parts of the country. The necessity of the enforcement of regulations, such as were suggested, is becoming more and more apparent as our experience increases. Such an act as the medical control of marriage must of necessity be a state legislative one, and while we can but mention it here, hoping that the State authorities may see fit to adopt the suggestion and introduce legislation upon the subject, we would welcome such a law as perhaps the greatest boon in the matter of prevention of disease that mankind has ever enjoyed; the health reports of this city would in a short period of time prove that what at first sight seems a harsh measure is in reality a disguised blessing, second to none in far-reaching effect. It is a social custom unfettered by restrictive laws that permits union in marriage of all who seek it. The "survival of the fittest" is a natural law which man has adopted and put to artificial use. The ancient Spartans founded their physical manhood upon this law, and their extreme measures enabled them to build a mighty state. Our civilization does not encourage similar methods, for the same end can—with some patience—be attained by measures that are as humane as they are efficacious; by properly regulated marriage laws we can anticipate such emergencies by preventing the birth into the world of infants who are heir to disease. Such laws will bring health and strength to city, state and nation. I appreciate

that these views may be considered Utopian, but some day their necessity will be appreciated, and their adoption realized.

An effort will be made during the coming year to interest the medical profession of this city in an honest endeavor to lessen the danger of contagion that exists for those who live in the same atmosphere with consumptives. Physicians will be urged to report cases of consumption for the sole purpose that literature on restriction and prevention may be sent to patient and to medical attendant as well. It is confidently hoped that by this means much can be accomplished without recourse to the harsher methods of segregation, isolation and placarding. In Michigan, where methods such as above described have been pursued since 1891, the death rate from tuberculosis has suffered a steady diminution, and it can be ascribed to nothing but the efforts of the health authorities in this direction.

The following circulars, issued by the State Board of Maine, are undoubtedly a step in the right direction:

THE PREVENTION OF CONSUMPTION.

[*Revised Edition of 1900.*]

That insidious disease which we call consumption, phthisis, or tuberculosis of the lungs, is the most terrible destroyer of lives with which civilization has to contend.

At the present time the fact of the infectiousness of consumption is firmly established in a scientific way, and enough is known of the natural history of the infective agent, the *bacillus of tuberculosis*, and of the ways in which it is communicated to man, to enable us to lay down rules for the prevention of the disease with more positiveness than was formerly possible.

The source of infection is two-fold, from one human being to another, and from tuberculous animals to man. The tuberculosis of animals and human consumption are of the same nature.

From domestic animals there is danger of contracting the disease by the use of the flesh, and especially by the use of the milk from those which are tuberculous. Many children die in their earlier years from various tubercular diseases, tubercular inflammation of the brain, "consumption of the bowels," etc. Many of these deaths are due to living amid infectious surroundings and breathing infected air, but a considerable proportion die from infection received in the milk of tuberculous cows, or in that from mothers suffering from tuberculosis in some form.

By far the greatest source of infection, however, are consumptive human beings, but fortunately the ways in which the contagion is disseminated are but few, and by intelligent care they may be effectually controlled.

From the human source, we may consider the expectoration (the sputum) as practically the one great danger. The consumptive sputum usually contains an abundance of the infection, the bacilli, and these microscopic organisms are found to be capable of retaining their vitality and their infectious qualities for a long while, even after the sputum has been thoroughly dried.

As a general proposition the statement is true that the breath of the patient is not infectious, and that the same may be said of the sputum so long as it remains moist. Later experimental work, however, indicates a possibility of infection in the immediate vicinity of hard, open-mouthed coughing.

Another line of investigation has proved that *the careless consumptive patient is a focus of infection, and a danger to all persons who come much in proximity to him,* especially to those who dwell in the same rooms with him.

The reason of this is that the expectoration of the patient, spit upon floors, carpets, pocket handkerchiefs, or clothing, becomes dried and pulverized, and, floated in the air, still contains the infectious germs, and cannot be inhaled without great danger.

Though infection may be regarded as the principal, *the essential,* cause of consumption, there are nevertheless various untoward influences which have much to do with increasing the death-rate from this disease, and they should never be disregarded. The most important of these are the breathing of impure air,—that of unventilated sleeping rooms, living rooms, school-rooms, and offices,—the use of food not sufficiently nutritious, and dwelling upon a damp soil.

Heredity, formerly thought to be a potent cause of pulmonary consumption and other forms of tuberculosis, is now known to have but little part in the causation of the disease. Since the infectiousness of the disease has been shown, family groups of consumption, "house epidemics," are now referred to infection rather than to hereditary influence. Though heredity is possible, the best authorities, the world over, now teach that cases of hereditary transmission of tuberculosis are very rare.

PREVENTION.

Rules for the Patient.

Two facts should encourage the patient: One is that there is always an intrinsic tendency to recovery in the earlier stages of the disease, and that, under modern treatment, a large percentage of cases do recover; the other is that there is no reason for any person to think that he is doomed by heredity, no matter what his family history may be.

It should be impressed upon consumptive patients and other persons living with them that the sputum (what they cough up) is dangerous and must be properly disposed of. It must not become dry. There are several ways in which the sputum may safely be cared for:

a. Pressed paper spit-cups, costing but little, are on the market. One or several can be used daily and, after it has been used, each cup with cover and contents can be burned.

b. Paper cups held in a metal frame may be used. After use the cup and contents are burned.

c. Metal or porcelain spit-cups or spittoons, each containing a small quantity of disinfecting solution 1, 2, or 3, may be used. The final disposal of the sputum may be:

1. By pouring it down the water-closet.

2. By cremation when practicable. (a) In a small fire outdoors. (b) In the house heater, using a stout sheet iron box with a handle three feet long. Partly fill the box with sawdust, or fold a paper inside it; pour in the contents of the spit-cup or cuspidor; with the direct draft of the heater open, invert the box over the firepot, holding the box in place a moment until the flame or the heat sterilizes it. When the sputum is to be cremated, but a small quantity of the disinfecting solution should be used in the spittoon.

3. By setting the vessel aside, preferably in a warm place, so that the disinfectant may act eight or twelve hours longer. The quantity of disinfecting solution should be in excess of that of the sputum. Then bury or otherwise dispose of it so that flies and the domestic animals cannot reach it.

The patient should have two spit-cups or spittoons for alternate use. A cover should exclude flies. Cleansing can be done with washing soda and boiling water, or soap and hot water.

d. Knopf's aluminum pocket spit-flask is very convenient, especially when the patient is away from home, is traveling, or is confined to his bed.

e. When away from his room the patient may spit into Japanese paper napkins to be put immediately into a rubber tobacco-pouch until they can be burned.

f. Spitting into handkerchiefs should be avoided. If occasionally forced to do this, the handkerchief should be boiled before the sputum dries. Handkerchiefs upon which the sputum is allowed to dry, surround the user with a halo of infection, infect the pocket and everything else they touch, and lessen the patient's chances of recovery. After coughing, the lips should not be wiped with the handkerchief used for the nose. The lips may be wiped with paper napkins to be burned later.

Repress cough as much as possible. Cough gently with the mouth closed as much as possible. Never swallow the sputum. By so doing you favor the extension of the disease to the intestinal tract.

Do not soil personal or bed clothing with the sputum nor the hands when avoidable. Wash the hands often. Male patients, who wear a mustache or beard, should keep it closely clipped.

Do not infect the immediate surroundings of the home, nor spit upon the grass or hay or anywhere else where the sputum may be eaten by cattle, chickens, or other animals.

Rules for Attendants.

The floors, woodwork, and furniture of rooms in which consumptive patients stay should be wiped with a damp cloth, not dusted nor swept in the dry way.

Clothing may be disinfected by boiling, as in ordinary laundry processes. Rooms may be disinfected with formaldehyde fumigation—large doses—supplemented with the washing of the floor with solution 7. This should be done every few weeks when practicable, while the rooms are occupied by the patient. If the floor or other surfaces are accidentally soiled with sputum, the spots should be wet and rubbed thoroughly with solution 7, 1, 2. or 3.

Rooms for consumptives should have no fixed carpets. A few rugs may replace them. They should frequently be carried into the open air and exposed to the action of direct sunshine several hours at a time. For the thorough disinfection of them steam is the best. The table ware of the patient, the knife, fork, cup, and spoons particularly, should be kept separate and washed by themselves in scalding water.

In addition to the danger from infectious dust, if it is allowed to be diffused through the air, there are other possible ways of communicating the infection. It may be carried directly to the mouth by the fingers, or indirectly by handling articles of food. After soiling the hands, cleanse them carefully. Guard against inoculating cuts or abrasions of the hands with the sputum.

Rules for Everybody.

a. Anything tending to lower the tone of the general health may act as a predisposing cause,—insufficient nutriment, overwork, loss of sleep, worry, close and dusty air. Avoid these. Give sleeping rooms a prolonged airing and sunning by day, and as much night ventilation as is practicable. The dwelling place should be dry naturally or made so artificially. If it is thought that there is a family predisposition to consumption, an outdoor occupation should be chosen. Live in the open air and sunshine as much as possible.

b. Every new case of tuberculosis comes from some earlier case. The germs of this disease retain their vitality and their infectivity a long time under favoring conditions. Therefore do not bring into your house clothing formerly used by consumptives unless it has been thoroughly disinfected; do not move into an infected house or rooms, until the thoroughness of the disinfection is unquestionable; do not put to your lips or mouth, pipes, wind instruments, money, or anything else that has been used or handled by consumptives; do not buy bread, milk, or other articles of food, not to be cooked, from consumptives; kissing, particularly lip-to-lip, is unsafe if one party to the act is tuberculous; thorough cooking for meat, or a temperature somewhat below the boiling point (176 F. for 10 minutes) for milk, will render these safe articles of food.

By observing the rules which are expressed and suggested in the foregoing, the principal, if not all danger of infection may be avoided.

The open air treatment of consumptives and those who are threatened with tuberculous disease, has given much better results than any other. Particularly in Germany, and to some extent in this country, such treatment has been systematized in "sanitaria" for consumptives. Here the patients have the advantage

of a life under medical regulation, nutritious food, and such exercise or rest as each case requires; but the chief curative agent is an abundance of fresh air. Even in cold winter weather, patients, after a period of gradual habituation, and always guided by the judgment of the physician, pass almost the whole day in the open air, walking or sitting, or lying on resting places comfortably wrapped in blankets and furs. The results obtained in these institutions have been very successful even in those with climatic conditions less favorable than those of many parts of Maine. An abundance of pure air is the all important thing.

DISINFECTING SOLUTIONS.

SOLUTION 1.

Carbolic Acid (pure liquified),	7 ounces.
Water,	1 gallon.

Mix. This is approximately a 5 per cent. solution. For the disinfection of clothing this solution mixed half and half with water will do.

SOLUTION 2.

Lysol,	5 ounces.
Water,	1 gallon.

Mix. This may be used as a substitute for solution 1, one-half the strength sufficing for uncolored clothing. Many colors are changed by it.

SOLUTION 3.

Solutol (crude or pure),	½ pint.
Water,	2 or 3 gallons.

Mix. This is a very efficient disinfectant for excreta, tuberculous sputum, and gross disinfection generally. If to be used in dwelling houses, or wherever the odor of the crude product would be offensive, pure solutol should be used.

SOLUTION 7.

Solution of Formaldehyde (Formalin),	6 ounces.
Water,	1 gallon.

Mix. This mixture contains a little less than 2 per cent. of formaldehyde.

It is a good plan to dissolve 4 or 5 tablespoonfuls of common salt in each quart of solution 1, or solution 2, thereby increasing considerably the disinfecting power of the solution.

DIRECTIONS FOR THE DISINFECTION OF THE ROOMS AND THINGS USED BY CONSUMPTIVES.

Though it is believed that there is little danger of the infection of the rooms occupied by persons with consumption if there has, all of the time, been a strict compliance with the rules laid down in Circular No. 54, it nevertheless is the safer way to subject to a careful cleansing and disinfection all rooms that have been occupied by consumptives. Particularly in rooms where strict sanitary rules have not been observed, the need of disinfection is emphasized by the fact that the germ of tuberculosis retains its infective powers a long while, under favoring conditions.

The bacillus of tuberculosis is hard to kill: use, therefore, only those disinfectants which are the most rapidly destructive of it when it is in its dry state. In fresh sputum the bacillus requires different treatment. (See Circular No. 54.)

In disinfecting a room that has previously been occupied by a consumptive, let the order of procedure be about as is recommended in the following, sorting out and disinfecting the clothing, and other smaller things first.

a. CLOTHING. Disinfect with steam or by boiling. Boiling for half an hour will disinfect any article that can be subjected to that process. Steam disinfection for one hour, properly done, is just as trustworthy, and has the advantage of wetting and shrinking fabrics less.

Steam disinfection on a small scale can be done in the common wash-boiler by supporting, above the water with two bricks or otherwise, a false flooring of laths or thin board. Pour in two or three inches of water, place the articles to be disinfected above the false flooring, put on the cover, and steam one hour after the water begins to boil, keeping the water briskly boiling all the time. To insure certainty of success there must be a brisk fire and the steam must be kept streaming through the articles all the time. After the steaming, carry the boiler into the open air and throw the things over a line to dry.

In every town and city a portable steam disinfector, such as is described on page 6 of Circular No. 68, or a better one, should be available.

Clothing can also be disinfected by soaking it twenty-four hours in Solution 6 or 7. Then rinse thoroughly.

b. BEDDING. Disinfect sheets, blankets, pillow-cases, quilts, comforters, and spreads, as under (*a*). Pillows and feather-beds are preferably disinfected with steam. They need not be ripped,—the steam will penetrate. Empty straw beds, burn straw, and disinfect tick with steam as under (*a*). Burn cheap mattresses. A mattress worth the trouble may be disinfected with formaldehyde as follows: Make a tight box large enough to contain it. Render it air-tight by pasting up all cracks and corners with stout, firm paper. Place the mattress in it, and sprinkle or spray it with at least 4 ounces (1 gill) of formalin; put on the cover quickly; paste it up. Leave the mattress twenty-four hours.

Or a mattress may be disinfected by spraying it with formalin and quickly and tightly wrapping it in large rubber blankets.

Featherbeds and pillows may be disinfected with formalin as is advised for mattresses.

c. RUGS and CARPETS. Burn old ones and all that cannot be surely disinfected. Steam disinfection is the surest; when that is impracticable, formaldehyde in concentrated doses, as for mattresses, may be used for valuable carpets or rugs.

d. UPHOLSTERED FURNITURE. If the room can be disinfected with formaldehyde, spray or sprinkle the upholstered part with Solution 7, just before the room disinfection, and leave in place. If formaldehyde gas is not available, spray or wash thoroughly with Solution 7, or 6, then expose to the action of direct sunshine three or four days,—the longer the better.

e. ROOMS. Avoid raising a dust. If the removal of a carpet leaves dust on the floor, remove it after sprinkling wet sawdust, or with damp broom or damp cloths. With a damp cloth remove dust from furniture and other surfaces. Boil all cloths thus used. If formaldehyde disinfection is available for the room, wash in Solution 7 all surfaces of walls, or furniture that may have been soiled with sputum. Wash or spray the floor with Solution 7, letting the solution soak into the cracks well. Then fumigate with formaldehyde letting the stripped furniture remain.

If formaldehyde is not available, wash very carefully in Solution 6 or 7 the floors and all surfaces which were exposed to the danger of soiling with sputum. Complete the disinfection of the room with liquid disinfectants, repeating the washing, the interval between the two washings not necessarily exceeding half an hour.

For the disinfection of rooms with formaldehyde, the new *vaporizer* devised by Professor Robinson, in which formaldehyde solution is used, is recommended by the State Board as a simple, compact, and efficient piece of apparatus. It vaporizes solution of formaldehyde instead of wood alcohol. At least half a pint of formaldehyde solution should be used for each 1,000 cubic feet of space. Keep the room closed eight hours at least.

In preparing for formaldehype disinfection the room must be made as tight as possible by closing the mouths of chimneys, other ventilating openings, chinking or pasting cracks, etc.

SOLUTION 6.

Corrosive Sublimate,	1 dram.
Water,	1 gallon.

Mix and dissolve. Label, *Poison!* This is approximately a 1:1000 solution. Its use should always be under the direction of some intelligent and careful person. This is not trustworthy as a disinfectant of fresh sputum. Destroys metals and gilding. Must be mixed in wood, glass, or earthen ware.

SOLUTION 7.

Solution of Formaldehyde (Formalin),	6 ounces.
Water,	1 gallon.

Mix. This mixture contains a little less than 2 per cent. of formaldehyde.

Another much overlooked source of tuberculous contagion exists in the school room. I refer to the teachers. It is well known that there is much tuberculosis among teachers; and since a single tuberculous individual, living in the same atmosphere with many small children, can easily be a fruitful source of contagion, the suggestion that all applicants for the position of teacher be first compelled to pass a satisfactory physical examination, is one that must appeal strongly to every parent. The New York Board of Health has adopted such measures, as the following circulars will show:

DEPARTMENT OF EDUCATION.

THE CITY OF NEW YORK.

To the City Superintendent of Schools,
No. 146 Grand Street.

PHYSICAL EXAMINATION.

PART I.—QUESTIONS TO BE ANSWERED BY THE APPLICANT.

1. Have you had a severe illness within two years? If so, what? *Ans.* ——
2. Have any of your parents, brothers or sisters suffered from phthisis? *Ans.* —
3. Are you subject to any chronic disease or ailment? *Ans.* ——
4. How much time have you lost from your duties through illness, during the past two years? *Ans.* ——
5. Have you any disease of the throat, eyes or ears? *Ans.* ——
6. What are your habits as to use of narcotics, wine, malt and spirituous liquors? *Ans.* ——
7. Have you been successfully vaccinated within eight years? *Ans.* ——

(Signature of applicant) ——

Address —— Age ——
License applied for —— Examination No. ——

PART II.—QUESTIONS TO RE ANSWERED BY THE PHYSICIAN.

1. Are the applicant's lungs healthy? *Ans.* ——
2. Has the applicant organic disease of the heart? *Ans.* ——
3. Has the applicant disease of the kidneys? *Ans.* ——
4. Has the applicant any defect in hearing or vision? If so, describe it as to kind and extent? *Ans.* ——
5. Has the applicant any defect or disease which will probably disqualify him or her from performing regularly a teacher's duty? *Ans.* ——
6. Is the applicant, in your opinion, able to stand the nervous strain of classroom work? *Ans.* ——

7. Do you advise that the applicant be vaccinated before receiving a license? *Ans.* ——

8. Do you recommend the applicant? *Ans.* ——

REMARKS: ——

(Signature of Physician) ——

Date of Examination —— Address ——

NOTE.—These blanks will be furnished to the physician, and, after being filled in, must be mailed immediately by the physician to the City Superintendent.

DEPARTMENT OF EDUCATION.

THE CITY OF NEW YORK.

CERTIFICATE NO. 1.

This is to certify that I have this day received a fee of Three Dollars for the physical examination of —— applicant for —— License, under Resolution, Board of Education, April 25, 1900.

——, 190 ——

Physician.

CERTIFICATE NO. 2.

This is to certify that the above-named applicant was appointed a regular teacher in —— School —— of the Borough of —— on ——, 190

——, 190 ——

Secretary, School Board.

Borough of ——

CERTIFICATE NO. 3.

I have accepted this appointment ——, 190.

——

Applicant.

N. B.—Certificate No. 1 is to be signed by the physician on the occasion of the physical examination and given to the applicant. The applicant should retain this certificate until he is appointed as a regular teacher (not as a substitute in elementary schools). He should then have Certificate No. 2 filled out and signed by the Secretary of the School Board of the Borough in which the appointment has been made.

After signing Certificate No. 3, the applicant should file this entire document in the office of the City Superintendent of Schools.

While such rules endanger the positions of a few teachers, it is more than compensated by the knowledge all parents possess that the

risks their children--perhaps some delicate ones at that—run at school are reduced to a minimum.

There is another subject that deserves our attention, and that is the barber shop.

In an interview on this question I am quoted as being opposed to any regulation in this matter. While what I said at the time still holds good, viz.: that the better class of barber shops need little regulation, yet there are a great many in all large cities in which the laws of common cleanliness are not observed to the extent necessary and desirable. It is this class of shops in particular that my present recommendations are intended to reach, but since discrimination would be unjust, the regulations adopted must apply to all alike.

In suggesting the adoption of protective measures it is not intended to cast discredit upon the barbers, for they follow the custom of decades past. A few words will, however, show the necessity for simple, though rigorous measures that ought to be employed.

All the barbers' utensils, hair brushes, combs, razors, cups and shaving brushes, alum sticks and powder puffs, are in constant use, pass from patron to patron, with none, or the most superficial cleansing only. Is this sufficient? Certainly not. Numerous cases of pediculosis (hair lice) and barbers' itch are contracted in the barber-shop, and the stick of alum that is rubbed over wounded skin surfaces can easily be the carrier of infectious germs from one individual to another.

Powder puffs, too, are rubbed over perspiring surfaces and reach the faces of all customers in rotation. Actual experiments have demonstrated the transmission of disease germs by these careless methods.

Measures should be introduced, simple but rigorous, to protect all patrons of these shops from disease, and rules such as are enforced in Boston and New York can easily be employed, and will surely work no hardships. The following rules adopted by the Boston Board of Health, are simple and easily employed, and entail no expense or inconvenience:

HEALTH DEPARTMENT.

OLD COURT HOUSE.

BOSTON, May 4, 1900.

At a meeting of the Board of Health, this day, the following regulation respecting barber shops was adopted:—

REGULATION FOR BARBER SHOPS.

The place of business, together with all the furniture, shall be kept, at all times, in a cleanly condition.

Mugs, shaving brushes and razors shall be sterilized by immersion in boiling water after every separate use thereof.

A separate, clean towel shall be used for each person.

Alum, or other material, used to stop the flow of blood shall be so used only in powdered form, and applied on a towel.

The use of powder-puffs is prohibited.

The use of sponges is prohibited.

Every barber shop shall be provided with running hot and cold water.

No person shall be allowed to use any barber shop as a dormitory.

Every barber shall cleanse his hands thoroughly immediately after serving each customer.

Attest.

C. E. DAVIS, JR.,
Secretary.

In many of the German cities such regulations are in force, small dry heat or formalin sterilizers being used.

MEDICAL INSPECTION OF SCHOOLS.

Medical inspection of schools, for the purpose of preventing the spread of contagious diseases, has, within the last few years, received its full share of attention by medical authorities and sanitarians. A number of our larger cities, among others New York, Boston, Philadelphia, Chicago, and Detroit, recognizing its great importance, have already introduced such systems.

In a recent discussion upon this subject at Philadelphia, Dr. W. W. Keen made the following statement:

"The State owes two duties to its children. The first one, an education; and in order to obtain this, we all know that the State has passed a new law—compulsory attendance at school. The second duty of the State to its children, is a preservation of their health, and yet at the present time, owing to the compulsory education law

and the absence of any law for medical inspection, we compel our children to go directly into the midst of danger to their health. You all know very well that at the seaside hotel or boarding house, if a case of scarlet fever or diphtheria breaks out, you find the place deserted in from twenty-four to forty-eight hours unless the child is taken away; and yet right in the midst of our schools a case of scarlet fever may exist, or a case of diphtheria break out, and all of the children are exposed to it, just as though it were a healthy child. Now, this is not right, and this practice ought not to be, when it bears so severely on the poor, or those who are either unable or do not know enough to obtain medical aid. Being in a rich or well-to-do family, when the child shows symptoms of sore throat (typical disease, and most dangerous to our school children), instantly a physician is called and the child kept from school, in order to nurse it at home. But in a poor family, very possibly the woman going out to do washing from day to day, it is impossible for her to take care of the child at home. In addition, she does not call a physician. The child is sent to school. The others are not protected; hence this child spreads the disease to all with whom it comes in contact. We must not forget, in connection with this, the fact that it is not the severe cases that are dangerous; they are so sick they must stay at home, but it is the simple cases that are the cause of severe ones very often. A mild case in one child may give another child a severe attack of diphtheria; a mild case of scarlet fever in one child may give your child a fatal attack of the disease. Therefore it is that this medical inspection of schools, the finding of mild cases each day going to school who ought not to go, is saving an enormous number of very likely severe cases, as well as many mild ones. Moreover, a great many of these cases are not made compulsory of notification. We can not have every case of measles, chicken pox, infected heads, and so on, reported. That is impossible. Yet these children go to school and infect others; and, taking measles (a mild disease) as an illustration, very many of us, I believe, in different communities do not regard it as particularly dangerous, and yet the records are very large regarding mortality as a result of measles. Next to all those oral and respiratory contagious diseases comes diseases of the eye,

where the secretion likely goes on the handkerchief and then to books, desks, etc. They are touched by the healthy children, who, placing their fingers in their eyes, are infected from the first child. The records of our blind asylums show that the blindness of a great majority of the children that are filling these establishments has resulted from disease. We must remember, therefore, that these cases of non-reported diseases are as dangerous as reported ones. You may possibly have noticed the large number of children that were examined in New York and found ill. Out of 9,000 cases that were examined, some 1,200 were sick enough to be sent home—too ill to be at school; and what is still more striking, in Chicago 744 cases of diphtheria in school led to the discovery of 26 cases in homes—cases that had not any physicians called to them, therefore were not reported to the Board of Health. To these two instances I shall add a third, namely, that 231 cases of scarlet fever in school were discovered, not by physicians at home, not by careful mothers who could see that their children were ill, but 231 cases allowed to go to school were sent home by the physicians in attendance, the medical inspectors of the schools; and then, notifying the Health Board where these children lived, resulted in discovering 745 cases at home. I venture to think that the very facts that I have stated, from the sanitary point of view, are a justification of the necessity of compulsory medical examination of school children, lest they become a nuisance in the community in the technical sense."

However, before entering upon the subject of medical inspection of schools, I desire to call your attention to a few important facts that are in direct connection with, and naturally precede it.

The desire of sanitarians is to prevent diseases, especially contagious diseases. To accomplish this result we must in the first place adopt a number of precautionary measures, that will aid us in our efforts to overcome disease, and simultaneously to be the means of maintaining that healthy and robust condition among children in which they show the least tendency or susceptibility of contracting diseases of any kind.

To begin with, all school buildings should be inspected at regular intervals by a sanitary inspector of the Health Department, pre-

ferably a physician, whose entire time should be devoted to this work; one who is familiar with modern sanitary requirements, and competent to perform this work in such a manner as to maintain our schools in a complete sanitary condition. No greater need exists at present in any department of the city's administration, than for a competent and energetic medical inspector, in whom full authority shall be vested to adopt all such measures as may be deemed necessary by him to place the school buildings of this city in a perfect condition from a sanitary point of view.

It should be the duty of this official to examine every school systematically. Beginning with the basement, he should observe that it is clean, dry and well aired; he should examine all the plumbing and see that the latrines and closets are in perfect condition; in the classrooms he should observe whether the dimensions of the rooms are adequate for the number of children in attendance, and have regard to the temperature of the different rooms; he should observe whether adequate facilities for proper ventilation are at hand; he should pay particular attention to the size and position of desks, seats and blackboards, also to proper lighting; he should test the air of schoolrooms to ascertain the amount of carbon dioxide or other deleterious gases present.

It should furthermore be his duty to examine all plans and specifications of new buildings to be erected in the future, and to pass judgment upon their construction, as far as they pertain to sanitation and public health. This would be an important part of his work.

As an example I desire to call your attention to one of the commonest and grossest violations of sanitary laws, as relating to schools, and that is the practice of placing water closets and latrines in the basements and cellars. Happily this fault has been remedied in the construction of the newer buildings, but it still exists in some of the old structures. The most advisable plan would be that such closets should have no connection with the school building proper at all. They should be located in a separate building, apart from the main structure, and only to be approached by a covered hallway.

In spite of the most scrupulous care, it is well nigh impossible to keep these basement closets and latrines, that are used daily by from four hundred to five hundred children, in such perfect sanitary condition that no foul odors and gases are generated. That such contamination of the air is detrimental to health no one will gainsay, and this is especially true with growing children who need for their physical and mental development the purest and freshest air obtainable. All basement closets at present in existence in our schools should be removed as soon as practicable.

CLEANLINESS OF SCHOOLS.

This is another important subject, and one in which there is a great field for improvement. Cleanliness of the school should be insisted upon by the principal in spite of all objections that a janitor may raise. The floors should be swept daily with moistened sawdust, all doors and windows being opened during this time, providing the weather permits it, and again for fifteen minutes every morning one-half hour before school begins. All woodwork should be wiped with a moist, clean cloth instead of feather duster. Floors should be scrubbed, not mopped, once a week. All doors, window sashes, staircases, hand rails, and in fact all surfaces not injured by water, should be thoroughly cleaned with soap and water at least once a week.

The present arrangements for supplying drinking water by means of a few cups for a large number of children, should be done away with entirely, as by these means contagious diseases, such as diphtheria, etc., are more easily transmitted than in any other way. I would advise the use of the individual drinking cup, or the employment of a very ingenious device recently invented by a citizen of Rochester, and designed to do away with the drinking cups of schoolhouses and public places. The "Sanitarian" described this drinking fountain as follows: "The Drinking Fountain is an ingenious device recently invented by a citizen of Rochester, N. Y., which wholly supplants the use of cups and other drinking vessels in public places. It consists of a marble pedestal about three and a half feet high, capped with a funnel-shaped basin twelve inches in diameter con-

nected with the water supply. Upon pressure of a lever at the base of the basin a jet of water shoots up from the center of the basin and into the mouth when held over, and from this—the jet being small and without spatter—with very little tact thirst may be abundantly satisfied without the intervention of a drinking vessel of any kind. It admits of no contact of the lips with the jet-pipe or any other portion of the apparatus, the water flows from the supply pipe through the jet directly into the mouth, and all waste into the bowl immediately flows off by an escape pipe, none is allowed to accumulate."

The interchange of books among scholars should not be allowed, unless such measures be adopted as to render the transmission of disease impossible.

A very commendable feature has recently been introduced into the public schools in the city of Boston. The Paul Revere school in that city has had its basement fitted up with bathing facilities for the use of the school children. The basement is divided into two separate apartments, one to be used for boys, the other for girls. Each apartment can accommodate thirty bathers at one time, a towel and piece of soap being furnished to each bather. A matron has been placed in charge of the girls' department, and the janitor of the school performs similar duties for the boys. If this experiment should be successful, similar facilities will be furnished to the other schools.

In New York city the public school No. 1, of Manhattan Borough, is to be provided with twenty-six needle baths, with hot and cold water. These will be opened for the use of the boys of the school. The plan is to allow the boys, under the direction of the principal, to bathe in rotation by classes.

The importance of cleanliness cannot be overestimated. It is the first requisite toward good health, and should be impressed upon a pupil's mind as of equal importance as a knowledge of arithmetic or geography.

It is only within the last few years that the attention of the general public has been called to the great importance of enacting laws that shall be the means of protecting the health of our school children. In his annual report for 1897-98, the United States Commissioner

of Education calls attention to the laws enacted in different States for the prevention of contagious diseases in schools. A few statistics may be of interest.

Twelve States have enacted laws for protection against contagious diseases; seventeen States enacted laws in regard to vaccination; seventeen States require the inspection of plans and specifications of school buildings by a higher authority than the school board. Two States, Massachusetts and Connecticut, are the only ones that require a standard of ventilation.

The State of Kentucky is far in advance of all other States, and is the only State that possesses specific and clear laws upon the proper seating of children, and upon the air space allotted to each child. The county superintendent is given absolute power. The law reads as follows:

"The county superintendent shall condemn any school building which is dilapidated, unhealthy or otherwise unfitted to be occupied for the purpose of a common school. He shall condemn all school furniture or apparatus insufficient in quantity or not of the required character, and order the same replaced with proper furniture and apparatus. He shall visit at least once a year each school, and at the time of his visit note in a book kept for this purpose the condition of the school house, furniture, grounds, etc., and shall admonish the teacher found remiss in the matter of cleanliness of the house and ventilation of the same, and shall complain to the trustees in cases of gross neglect in these respects." In regard to the construction of school buildings, the law says: "Each school house hereafter to be erected shall have a floor space of not less than 10 square feet to each pupil in the district, and there shall be at least 10 feet between floor and ceiling. The trustees shall furnish each child a seat, patent or otherwise, with a back; the height of seat and back to suit the age of the child. They shall also provide a supply of good water, etc., etc."

The system of daily medical inspection of schools, as recently introduced in this city, must commend itself to every thoughtful and loyal citizen. It has long been recognized that schools are an important factor in the spread and propagation of the acute infectious diseases. The close communication for five or six hours daily of a

large number of children peculiarly susceptible to these diseases, in rooms generally over-crowded, and in many instances lacking in proper light and ventilation. The habit among children of exchanging toys, slates, pencils, etc., the common use of a single drinking cup, are all favorable factors in disseminating contagious diseases.

In my annual report for 1898 I called attention to this fact and recommended a system of daily inspection of our public schools. It was not, however, until the beginning of this year (Jan. 1900) that a perfect system of daily medical inspection was introduced.

The year 1899 has shown a more or less epidemic prevalence of many of the contagious and infectious diseases, both in this country and abroad, and Milwaukee was no exception. Toward the end of the year the gradual increase in the number of cases of scarlet fever occurring in this city attracted our attention, and induced us to adopt more stringent measures for checking its spread. Sanitary inspectors were instructed to observe closely all quarantined houses, and to strictly enforce all quarantine regulations. In spite, however, of all extra precautionary measures adopted, the prevalency of the disease steadily increased.

The mild character in which the disease manifested itself made it extremely difficult to control its spread. It was a common occurrence that children were kept at home for a few days, being affected with what the parents regarded as simply a slight cold which would not require the services of a physician, when in reality such children were suffering from a mild attack of scarlet fever, returning to school within a few days, only to spread the disease broadcast among the other school children.

A rigid system of daily medical inspection of our schools seemed to me the only rational and proper way of keeping this and other contagious diseases from spreading. With this end in view, and in accordance with Section 2, Chapter 12, of the Milwaukee City Charter, which gives the Health Commissioner the power to appoint in an emergency, or during the prevalence of any infectious or contagious disease such temporary special assistants as may be needed, I appointed seven additional Assistant Commissioners of Health, increasing in this way the regular number of the force to twelve. This

gave us a sufficient number to perform the work in a thoroughly scientific manner. The city thereupon was divided into twelve districts, allowing one district (averaging five schools) to each physician.

To do this work of medical inspection successfully, however, and in order to accomplish the best results, it required the hearty co-operation of the school authorities.

After consultation with the Superintendent of Schools and members of the School Board, the following circular letter was forwarded to all the school principals in the city:

MILWAUKEE, Jan. 22, 1900.

Dear Sir—Commencing Tuesday, Jan. 23, 1900, the Health Department will establish a system of daily inspection of all public schools in the city of Milwaukee, by a corps of competent medical officers, appointed expressly for this office.

By adopting this method of medical supervision of our schools the Health Department expects to overcome, in a great measure, the present prevalence of many communicable diseases incidental to school life.

The success of this plan depends largely upon the co-operation of the school principals and teachers in the work, and upon the strict observance of the following regulations:

1. Hours of inspection from 9 to 10:30 a. m. daily.

2. A convenient room should be selected in each school to be designated "Quarantine Room," and to be used for this purpose only.

3. All scholars who have been absent from school on account of sickness for two days or more, shall, upon their return, be sent to the quarantine room awaiting the arrival of the medical officer.

4. All children who have recovered from, or in whose family there have existed the following named diseases: Diphtheria, membranous croup, scarlet fever, measles, whooping cough, and who have received from this department a certificate of health, shall, upon arrival at their respective schools, be detained in the quarantine room until their condition has been passed upon by the medical inspector.

5. Whenever a child arrives in school ill, or is suffering from

any disease which the teacher has reason to suspect of being contagious in nature, such child shall be immediately sent to the quarantine room to await the arrival of the doctor.

By instructing the teachers in your school to observe the above rules you will greatly assist the Health Department in its work in reducing the chances of contracting communicable diseases in our public schools.

Respectfully yours,

F. M. Schulz, M. D.,

Commissioner of Health.

Our aim, in adopting this system of medical inspection of schools, is primarily to effect a reduction in the prevalency of contagious diseases in this city. This is accomplished in two ways. 1. By endeavoring to discover at the schools all cases of contagious disease or such as appear suspicious, and removing them immediately, before the disease can be communicated to the other children. 2. By compelling all scholars who have been absent from school for two days or more, irrespective of the reason, to submit to examination by the medical inspector before allowing them any school privileges.

It is hardly possible to estimate the amount of good that has already been accomplished by this system of medical supervision, in eliminating cases that were in an infectious stage, and placing them in quarantine and under proper medical supervision. As to the expense connected with the system, this seems so infinitely small, in comparison with the enormous amount of good resulting therefrom, that it seems utterly impossible for any person to raise objection on this account. Furthermore, the community has a perfect right to demand the best possible protection against the spread of these diseases and the incidental interruption of the children's school life.

Although this system of medical inspection of our public schools has, up to the present time, not been made a permanent feature, I sincerely hope that your honorable body will fully comprehend and understand the great importance of this subject. It has been highly recommended by all medical and sanitary authorities, as well as by

eminent pedagogues, who have seen it in practical operation. In view of the great benefit that must necessarily follow its permanent introduction in our schools, and realizing its importance from the sanitarian's point of view, I consider it my duty to urge immediate action on this subject by your honorable body.

WATER.

Of all substances required in the construction and maintenance of the human system not one enters more freely and universally than water, and of none is it of greater importance that it be pure, of good quality and absolutely free from all contamination.

In matters pertaining to municipal sanitation the question of good water ranks pre-eminent, because the health and welfare of a city depends on it to such a great extent.

The knowledge of the importance of a good water supply for large cities is not, however, of recent origin. From time immemorial the question of pure water has played an important part, and all civilized nations have occupied themselves with devising practical means of solving it. Hippocrates, Pliny and Galen proclaimed the necessity of a pure and unpolluted water supply for the welfare and prosperity of a people. The former, as early as 450 b. C., called attention to the fact that polluted water was dangerous to health, and advised, even at that early period, what we still consider to-day the most effective process for destroying the dangerous element in polluted water, viz.: boiling.

Nearly all cities of ancient times placed the highest value upon an abundant and pure water supply. Immense sums of money were expended in constructing and perfecting systems that would meet these requirements; and the consequent aqueducts and conduits of those times are achievements, which, through the long run of centuries down to our time, have remained conspicuous monuments of the enterprise and high standard of civilization of the ancients.

Hezekiah, king of Judah, who reigned in the years 717 to 688 b. C., was a pioneer in constructing a system of water works by providing one for the city of Jerusalem.

The ancient city of Rome possessed a perfect system of water works. In the year 312 b. C. water was for the first time conveyed to the city from a distance. At that time Appius Claudius constructed the Appian aqueduct from the Alban mountains, a distance of eleven miles. The channel was underground the entire distance with the exception of about 100 yards. In the first century, at the time of Emperor Nero, Rome was supplied with water by nine aqueducts, the aggregate length of which was 255 miles, with a capacity of more than 200,000,000 gallons a day. After the construction of other aqueducts the capacity was increased to about 375,000,000 gallons a day.

An idea of the vastness of some of these aqueducts may be gathered from the fact that it required in one instance two centuries for the construction of one of these immense structures.

The sum of money expended in the construction of the famous Claudian aqueduct is said to have exceeded $12,000,000. This aqueduct, built 50 A. D., forms to-day one of the grandest and most magnificent of all Roman ruins.

All these facts go to show that at these early times the dangers connected with a polluted water supply were fully understood, and that the baneful results caused by using impure water in large cities were well known.

In the dark times of the Middle Ages, in this, as in many other respects, much of the good and valuable commenced and performed before, was interrupted and lost sight of. But slowly, and after many years, the great sanitary projects of ancient times again began to be appreciated. It is rather humiliating, and does not reflect much credit upon many municipalities of our day, that this question, which is of such vital importance to sanitation, seems to be totally ignored, and that even to-day, for dietetic purposes water is used such as the old Roman would not have considered fit to be used for their daily baths.

There are a number of large cities in this country that obtain their water supply directly from rivers whose waters are known to be polluted, and where, in some instances, the water is pumped directly into the distributing mains without even undergoing a process of

sedimentation. The detrimental result in such cases is generally shown by the typhoid fever mortality, which, as a rule, is relatively high.

It is encouraging, however, to note that the tendency during the last decade has been to improve upon the existing conditions; in this as in many other sanitary matters, it was Europe that took the initiative. Her great cities had awakened to the dangers of sewage pollution of their water supply and provided, in some instances at enormous costs, proper systems for securing pure water.

Vienna, for instance, procures its supply from the Austrian Alps, a distance of sixty-five miles, having entirely abandoned the river Danube, its former source of supply. Munich obtains its water from mountain springs quite distant from that city. Since the establishment of this new source, Munich has shown a marked improvement in its typhoid fever death rate. Whilst years ago this disease was one of the most prevalent in the city, there is at present hardly a sufficient number of cases to be found at the hospitals for demonstrating the disease to students of the various medical schools.

Manchester, England, receives its water supply from Lake Thirlmere through a system of conduits over a hundred miles in length.

The canal that supplies the city of Marseilles with water was constructed during the years 1839 to 1847. It is among the boldest undertakings of the kind in modern days. It has a capacity of 285,000,000 gallons per day. The water is conveyed about sixty miles, through forty-five tunnels of an aggregate length of eight and one-half miles, and across many valleys by aqueducts, the largest of which, that over the ravine of the River Ars, is 1,287 feet long and 262 feet high.

When we consider the enormous expense that many of the larger cities are subjected to in obtaining wholesome water, Milwaukee can indeed consider itself fortunate in possessing such excellent natural resources for obtaining pure water, where nothing more is required than simply to pump it into the distributing mains from the large blue body of water directly at its door.

J. W. Hill, C. E., in his classification of cities by typhoid fever statistics, which, in his opinion is the surest test of the quality of a city's water supply, shows Milwaukee (report 1896) to occupy third position among the larger American cities. Brooklyn and New York being the only two that show a lower typhoid fever mortality.

The following list shows the typhoid fever death rate per 100,000 of population (1896) of the larger cities in this country:

City.	Population.	Rate.
Brooklyn	1,140,000	15
New York	1,934,077	16
Milwaukee	257,500	18
St. Louis	570,000	19
Buffalo	350,000	20
Detroit	279,000	20
Davenport	35,000	20
Newark, N. J	230,000	21
Dayton	85,000	25
Quincy	42,000	26
Providence	150,000	27
Chattanooga	40,000	30
San Francisco	330,000	31
Boston	508,694	32
Covington	50,000	32
Knoxville	37,000	32
New Orleans	275,000	33
Philadelphia	1,188,793	34
Baltimore	507,398	37
Indianapolis	165,000	41
Lowell, Mass	85,700	42
Cleveland	330,279	43
Louisville	211,100	45
Chicago	1,619,226	46
Cincinnati	341,000	48
Washington	278,150	51
Nashville	87,754	55
Atlanta	100,000	60
Pittsburg	280,000	61
Denver	150,000	61
Jersey City	187,098	61.5
Newport, Ky	30,000	63.0

As may be noted by the tables appended to Dr. Bennett's report, Milwaukee possesses a pure water supply. By pure I do not wish

to be understood as meaning absolutely pure. Absolutely pure water does not exist free in nature. All natural waters contain more or less bacteria (non-pathogenic) and chemicals, which cannot, however, be considered as impurities since they are always found in all waters. By impurities, as such, we mean contamination of water with pathogenic and putrefactive bacteria, or the products of their activity upon organic matter during the process of decomposition and oxidation. These results are usually brought about by pollution of water with sewage.

There is a popular impression among the laity that the clearness of water is the most positive and best proof of its purity. This belief is erroneous. It has been demonstrated repeatedly at the laboratory connected with this department that water taken from wells, located in different parts of the city, contained sufficient quantities of staple and decomposing organic matter to class it as dangerous and unfit for use, and yet samples of water taken from them were perfectly clear and sparkling. In fact, a large number of typhoid fever cases were traced directly to water used from some of these wells.

On the other hand, turbidity is not always an indication that such water is impure and dangerous to health. Take as an instance our lake water at certain seasons, when storms are prevalent. The water will at such times show a decided turbidity, which is but the natural result of the disturbance of so large a body of water.

However, upon allowing such water to remain quiet the silt it contains will in time be deposited on the bottom of the vessel, thus causing the water itself to become clear.

The chemical analysis of the city's water, at times when the lake is turbulent, does not show such wide variations from the normal as its appearance would indicate.

Although the city at present possesses a good water supply, notwithstanding the fact that we are discharging about sixty million gallons of sewage into the lake daily, it is only a question of time, when through the natural increase and growth of the city the amount of sewage swept out into the lake will assume such proportions as to seriously affect the potability of our water. When this time arrives,

as it has with our neighboring city, Chicago, a very serious and perplexing problem will present itself.

It is well advisable to draw the attention of our community to this matter, which is of such vital importance to Milwaukee's sanitation, in order that a practical and expedient method may be found, by which our water supply may also in future years remain pure and unpolluted. The methods of water purification that have been found, by practical experience in other cities of this country as well as of Europe, to be the best, should be examined by a committee of sanitary experts, and the system recommended by them as the most suitable for our purposes, should in the course of time be introduced here in Milwaukee.

If the necessary steps for the selection of a good system are taken in time, as soon as necessity requires it, a system of purifying our water supply can be put into effect without endangering for any length of time the health and sanitary condition of the city through impure water.

In modern times the problem of water purification for large cities has actively engaged the minds of numerous sanitary experts and engineers of this country and Europe. The famous system of water works of the Ancients are being studied and examined, and many points of great practical value have been gained and adopted for modern sanitary purposes.

Various systems have also been tried in recent years. A great number of these have been found to be impracticable and useless, some being mere experiments. Others, however, have been devised, which showed admirable results, and by means of which a number of large cities now obtain an abundant sanitary and wholesome water supply. Of all systems known at present to have yielded commendable results, two are by all sanitary experts acknowledged to claim special consideration, viz.: the filtration system and the sewage disposal system.

One of these two methods would undoubtedly have to be adopted in this city. Either an expensive sewage system must be established, or, what in my estimation seems the preferable plan, an improved system of filtration by means of large sand beds, should be introduced.

The process of filtration is considered to-day as the best method of freeing water from disease producing germs. Purifying water by means of filtration is nature's own system, the pure and sparkling water of springs is conveyed to us after having passed through nature's filter beds, the subterranean strata of sand and gravel. By imitating in a practical way the process demonstrated to us by nature, the same excellent results are obtained, and practical experience has in every instance confirmed this theory. I only wish to call your attention to the well known history of the cholera epidemic in Hamburg a few years ago as a striking illustration. Before the introduction of its present system of filtration, that city obtained its water supply directly from the river Elbe. After a partial sedimentation the water was pumped into the mains for immediate use. Hamburg at that time had a high typhoid fever mortality. In 1893, directly after the epidemic of Cholera, a perfect system of sand filters was introduced, and although the source of its water supply is still the same, the typhoid fever mortality has since been reduced nearly seventy-five per cent. Similar results have been obtained in all cities where this system has been adopted for the purification of the public water supply. It is estimated that by this method from ninety-five to ninety-eight per cent. of all bacteria contained in the water is removed, and that this will, for all practical purposes, free such water from pathogenic germs and other matter held in suspension.

The first sand filtration plant was constructed in 1839 by James Simpson, for the city of London. Since then great improvements have been made both in the construction and the durability of these filters, so that now we can consider them as removed from the experimental stage, and established upon a scientific and practical basis. American cities have so far shown a remarkable indifference to the advances made along these lines in Europe, where, in nearly all larger cities systems of water filtration have been introduced. In our own country investigation into this subject was first instituted by the State of Massachusetts. The State Board of Health appointed a number of experts to ascertain the best method for purifying the water supply and the sanitary disposal of sewage. These gentlemen are conducting a series of experiments, the results of which are exceedingly interesting and of great value to the State.

FILTRATION.

The process of filtration is the separation or straining out from a liquid, small particles of matter held in suspension. The material used in filtration of water is sand and gravel.

Sand filters are divided into four classes: (1) Continuous Filter; (2) Intermittent Filter; (3) Natural Filter; (4) Mechanical Filter. Of these different types the continuous filter seems to be the one most commonly in use and best adapted for all purposes. It generally consists of a rectangular basin or reservoir covering an area of from one to two acres and of from ten to fifteen feet in depth, within a water-tight wall of masonry.

These filters may be open, or covered by a roof, as the climatic and other surrounding conditions would suggest. The bottom is usually level and contains a system of lateral drains, which conduct the filtered water, after having passed through the layer of sand and gravel, into a distributing reservoir, or into the water mains, as the case may be.

The filtering material itself consists, first, of a layer of gravel, coarse below and fine above, averaging all the way from one foot to four feet, and over this a layer of sand of from two to four feet in depth. The usual depth of water covering the bed of sand is from three to four feet. From this there is very little variation, as it has been found that fluctuation in the depth of the layer of water has an injurious effect upon the efficiency of the filter. The more recent systems are therefore all provided with an apparatus at the inlet pipe, working automatically, and controlling the flow of water, so as to maintain a uniform level continually. The same holds good as far as the rapidity of filtration is concerned. Fluctuation in this, as in the former, is also productive of bad results, such water generally showing an increase in the number of bacteria contained. The rate of filtration in nearly all filters is controlled by an apparatus placed between the filter and the reservoir, or mains.

With reference to the use of public water supplies for dietetic purposes in cities of Europe, J. W. Hill, C. E., an eminent authority on the subject, quotes, in his book on "Public Water Supplies," as follows:

"When comparisons are made of the typhoid fever death rates of cities in Europe with cities in this country, the claim is sometimes urged that the people of Europe, and especially of Germany, are not water drinkers—that beer is their usual beverage; and upon the other hand, that the people of the United States are not beer drinkers, but water drinkers, and therefore more exposed to water-carried infections. When it is stated that the Hague has a typhoid death rate of five per 100,000 of population, this, according to some critics, is not to be taken as an evidence of the high quality of water supplied to the city, but as an indication that the people of the Hague generally do not drink water, and depend upon beer or some other manufactured beverage.

"This expression of doubt by some, that the water may be so purified by artificial means, or may be naturally so pure as to largely diminish the probability of one contracting typhoid fever by drinking it, suggests inquiry along three lines:

"1. Is the water supplied to certain foreign cities such as to reduce the typhoid fever rates or inhibit the disease, if it were generally used as a beverage?

"2. Is the water generally used for drinking in larger cities of the United States such as to be the probable cause of our high typhoid fever rates?

"3. Is it true that the people of London, Berlin, Hamburg and other European cities are largely beer drinkers, while the people of Boston, New York, Cincinnati and other American cities are largely water drinkers?

"It is not possible to answer the first question directly. Despite the great chemical and bacterial improvement by sedimentation and (or) filtration of certain polluted waters like that of the Elbe at Hamburg, and the Maas at Rotterdam, one cannot say positively that such waters, even after treatment, will not contain the typhoid bacillus, or be the carrier of infection to some; and we are compelled to measure the improvement in quality of such waters by their influence upon the health of the people who use them.

"In regard to the quality of water supplied to the people of certain cities in Europe, it should be manifest, if this was not to be used

as a drinking water, that a very large annual expense could be avoided in those cities by pumping water direct into the reservoirs or street mains from any convenient source, without attempting in any manner an improvement in quality before it is distributed to the consumers.

"Water of high hygienic quality is not required for the sprinkling of streets and lawns, for the extinguishment of fires, for the flushing of sanitary apparatus, for steam boilers, and many other uses; and if the water is not to be used for drinking and other dietetic purposes, great care and expense in the source of a supply, or in efforts at improvement of the quality of water, are surely wasted.

"Considering that over 98 per cent. of the consumption of water by any large city is for purposes wholly unaffected by its hygienic quality, it would seem very singular indeed that a city like Berlin (for instance) should be at an extra expense of $10 per million gallons to fit the water for drinking purposes, before a gallon of it is permitted to go into the public mains. This great cost for purification of the water from Lakes Müggel and Tegel is not necessary if the water is to be used only for street sprinkling or other purposes apart from drinking and the requirements of the cuisine. Moreover, the water from Lake Müggel, after it has passed through the filters at Frederickshagen, as we have shown, is chemically and bacterially as pure as many natural springs or deep well waters which are known to be altogether safe for drinking purposes, and chemically and bacterially pure, or nearly pure waters are not needed for any of the many uses of water, excepting for drinking, cooking and the washing of uncooked articles of diet. No one would propose an elaborate and expensive treatment of a polluted water unless some portion of it was to be drunk.

"The water of the River Elbe, when it reaches Hamburg, is of sufficient purity for all ordinary purposes; but the most modern works upon a large scale for the improvement of polluted waters have recently been devised by that city, and these works are carefully operated to reduce the noxious properties of the Elbe water before it is distributed to the citizens. This work of purification is not intended to make the water better for the great majority of the uses to which

it is applied, but to make it a water which the inhabitants can drink with the least risk of infection from typhoid fever and other water-carried diseases. If it were a fact, as some are supposed to think, that the people of Hamburg do not drink water, why should that city be at such great effort and expense to render the water of the Elbe fit to drink before it is permitted to go to the consumers?

"But the most pronounced efforts to procure a supply of public water which certainly shall not be the cause of infection, is found at the Hague, where the water is first obtained from wells driven on the sand dunes and afterwards passed through filters of sand. The grade of which is finer than that of nearly every other city which has adopted sand filtration. The water of the Hague, as it comes from the driven wells in the dunes, very likely is equal to that of any of the driven wells waters which we are accustomed to drink with a feeling of perfect security. But the officials of that city, not content with a water which at its source is far superior to nearly all of our public waters, set about to improve its hygienic quality by slow filtration through beds of fine sand, with the result that their city has had for many years nearly the lowest recorded typhoid fever death rate of any of the large cities of the world. Are we to ascribe this low typhoid rate to the drinking of beer, gin, or Schiedam schnapps by the people of the Hague, or shall we credit it to the drinking of this exceptionally pure water from the public mains?

"From such information as the author has been able to obtain, it is altogether probable that in the consumption of beverages other than water we are quite abreast of the people of this old Dutch city, and the only certain difference in the conditions surrounding the two cities which would affect the typhoid rates is found in the quality of their respective public water supplies.

"It is not difficult to answer the second question. Nearly all the water supplies of the large cities of this country are polluted with household sewage, and are the carriers of the typhoid bacillus from the sick to the well. Having knowledge of that fact that many of our large cities are daily drawing water for drinking and other purposes from sources of known sewage pollution, it is proper to look

upon the typhoid rates of such cities as the natural result of this indifference to the first laws of health, viz., a pure drinking water.

"In regard to the third line of inquiry, the author is not able to state the per capita per annum consumption of beer by many of the larger cities of Europe; but the greatest consumption is accredited to Munich, which, for one year, used 125 gallons per capita. An investigation of the probable consumption of beer by the larger cities of this country reveals the startling fact that even the city of Boston consumed sixty-five gallons of beer per capita during the year 1894, while Cincinnati indulged itself to the extent of eighty gallons per capita, and Milwaukee, for the same year, reached the respectable figure of 105 gallons per capita. Of the list of ten of the larger cities of the United States, the lowest per capita per annum consumption for the year 1894 was forty-six gallons, and the highest 105 gallons. The amount of beer made and drunk in the United States for 1894 allows nearly sixteen gallons for every man, woman and child of the whole population. We all know that large quantities of beer (and other artificial beverages) are made and sold in this country, and we know that these are not substituted for the industrial and sanitary uses of water. From the limited information at command, I am sure it would be a mistake to assume that the people of Europe drink nothing but beer, or that the people of this country drink nothing but water."

Chicago, where for years past the quality of the water has been uncomfortably close to the danger line, and, in certain seasons of the year, was positively dangerous, has at last, with its characteristic pluck and enterprise, overcome all obstacles in its way, and has secured for its citizens an inexhaustable supply of pure and wholesome water. The completion and opening of the Drainage Channel, which took place a short time ago, marks a new era in the history of that city. The construction of the channel was one of the greatest engineering and sanitary enterprises ever undertaken in the world's history. It required for its construction the enormous sum of $33,000,000.

By the construction of this channel, all sewage which heretofore passed out into the lake, polluting the water in the vicinity of the sev-

eral intakes, will hereafter be intercepted and turned into the Chicago river, which has been made to reverse its eastward flow into Lake Michigan and resume the ancient but natural outlet of the chain of great lakes into the Mississippi valley.

The engineers in this great work have simply carried out an unutilized topographical plan, which nature itself seemed to have in mind, but which was prevented only by a freak of nature in piling up the glacial drift to such an extent as to obstruct this natural outlet to that great body of water.

Besides being the means of supplying Chicago with pure water, it simultaneously relieves that city of one of its greatest nuisances, the filthiness of the Chicago river. The condition of this river, which well-nigh became proverbial, has changed its appearance so suddenly, that during the first few days hundreds of people were seen loitering along the wharfs and bridges marveling at the sudden change wrought in the appearance of this inky malodorous mass of diluted sewage, so familiar to the average Chicagoan.

Energetic protests are being made by some of the cities along the route of the channel, claiming that this enormous amount of sewage would be detrimental to the general welfare of its inhabitants. This idea, however, is scouted by the Chicago authorities. Says one of them: "So thoroughly will the sewage be diluted by the time it reaches the great river, it will make the Illinois far cleaner in appearance than the Mississippi is now, and so far as the fears of residents of St. Louis and towns in central Illinois, that the drainage channel will bring disease and death to them, are concerned, eminent scientists have declared that fish will live in the drainage channel throughout its entire length. When the lake begins pouring into the Chicago river channel at a speed of one and a quarter miles per hour, fishermen will no longer take to the north pier, but may cast their lines from any of the docks along the river, which will be filled with pure, clean lake water."

It is to be feared, however, that this project may yet lead to protracted and expensive legal entanglements.

In connection herewith it may be well to call your attention to a subject upon which decisive action must be taken in the near future.

I have reference to the large number of wells that are still found in use in this city. Milwaukee has outgrown that stage of its existence where wells are an absolute necessity, and it is high time that these relics of by-gone days be forever done away with. In the populous districts of the city wells have become a positive menace to the general welfare of the community, as year by year the number of dwellings, barns and privy vaults surrounding them have gradually increased and encroached upon them.

It is only natural that during the process of time passages must have formed from these vaults and barns to the wells, and thus a direct communication opened between them, resulting in the contamination of the water. The analysis made by this department of water taken from such wells generally bear out this statement. In nearly every case the water has been absolutely unfit to be used for dietetic or domestic purposes.

Orders issued by this department, to close contaminated wells in accordance with Section 4, Chapter 13, of the City Charter, generally meet with strong opposition on part of the owner or consumer. They cannot understand how the water of a well that has supplied the neighborhood for twenty or more years, and which looks perfectly clear, can be dangerous to health. The fact alone that such a well has been in existence for twenty years or more in a populous district, where the entire ground must of necessity be saturated with the product of decaying and decomposing organic matter, would alone be a sufficient cause to abolish it, without even awaiting the result of a chemical analysis.

That these wells are in many instances the direct means of conveying the contagion of typhoid fever is patent, and were we able to close all wells at present existing in this city, our typhoid fever mortality would be lowered quite materially.

Respectfully submitted,

F. M. SCHULZ, M. D.,

Commissioner of Health.

BUREAU OF VITAL STATISTICS.

F. M. Schulz, M. D., Commissioner of Health:

SIR—I beg to present herewith, for your consideration, the twenty-third annual report of the Vital Statistics of the city of Milwaukee, for the year ending December 31, 1899.

DEATHS.

The number of deaths reported in Milwaukee for the year 1899, was 3,843, which was 505 more than in 1898. This number represents an annual death rate of 13.48 per 1,000 population, which a conservative estimate places at 285,000. The death rate, although somewhat higher than for the previous year, is, by comparison with that of other cities of its size, very satisfactory, and considerably lower than the average rate of Milwaukee for the last ten years, as is shown in the following table:

Year.	Population.	Deaths.	Annual Rate.
1890	204,500	3747	18.42
1891	214,000	4689	21.91
1892	223,000	4516	20.25
1893	232,000	4462	19.23
1894	241,000	4253	17.64
1895	250,000	3885	15.54
1896	260,000	3904	15.00
1897	275,000	3606	13.11
1898	280,000	3338	11.92
1899	285,000	3843	13.48

The average annual death rate for the ten years was 16.33 for each 1,000 living. The death rate in 1899 was, therefore, 2.85 less per thousand than the average for the whole period of ten years.

Of the 3,843 deaths, 2,065 were males, and 1,778 females, the proportion being 54 males to 46 females in each 100 deaths.

The proportion of those dying in infancy, or early childhood, is slightly less than for 1898. The number of deaths under five years being 1,541, or 40.1 per cent. of the total number. The percentage of infant deaths has steadily decreased each year since 1893, when it was 51.9. This is undoubtedly due, in a very large measure, to the close supervision and better regulation of the milk business of the city, inaugurated by Commissioner Wingate, and persistently followed to the present time.

By reference to Table No. 1, it will be seen that of the total number of deaths reported, 1,963, or 51.1 per cent., were born in Milwaukee; 484, or 12.6 per cent., were born in other portions of the United States, and 1,396, or 36.3 per cent., were of foreign birth. Of this number 887, or 23.1 per cent. of the whole, were born in Germany.

The following table shows the number of deaths from some of the principal causes for the past six years:

Causes of Death.	1894	1895	1896	1897	1898	1899
Typhoid Fever	70	63	46	31	46	47
Measles	69	1	29	36	2	26
Scarlet Fever	12	5	4	3	2	36
Whooping Cough	69	60	15	19	53	9
Diphtheria	237	179	198	106	61	109
Pulmonary Tuberculosis	354	288	335	346	316	372
Cancer	107	139	158	164	166	194
Meningitis	107	82	96	70	108	123
Apoplexy	90	90	108	92	107	120
Convulsions	250	239	246	191	127	144
Organic Heart Disease	143	161	185	212	190	228
Bronchitis	169	181	189	193	182	173
Pneumonia	245	271	237	239	227	281
Diarrhoeal Diseases	348	323	298	244	350	400
Nephritis	77	95	106	110	106	132
Congenital Debility	415	364	374	217	194	244
Senile Debility	124	116	108	123	84	69
Suicides	46	48	58	62	62	49
Accidents	119	145	143	125	116	155

That portion of the city having the greatest mortality rate is the Fourteenth ward, while the smallest is found in the Seventh ward, the rate being 16.27 per 1,000 in the former, and 6.51 in the latter.

This great difference being due to the larger relative infant population in the Fourteenth ward, and also to the fact that the existing sanitary conditions are much more favorable in the Seventh ward.

An inspection of Table No. 14 will show the number of deaths and death rate of each ward as well, and the number of deaths from some of the more important causes.

BIRTHS.

The births recorded in this department during 1899 numbered 7,544, representing an annual birth rate of 26.47 per 1,000. The number reported is 252 less than in 1898. Whether this difference represents an actual falling off in the number of births, or a neglect of the proper persons to report them, it is impossible to say. Of the 7,544 reported, 3,897, or 51.6 per cent., were males, and 3,647, or 48.4 per cent., females. The largest number of births were reported from the Fourteenth ward, and the smallest from the Seventh ward, these same wards having the largest and smallest number of deaths, respectively.

MARRIAGES.

During the year there were recorded in the department 2,810 marriages, while for 1898 there were 4,206 reported. This great falling off is due almost wholly to the effects of the so-called True Marriage License Law, which requires a license to first be obtained, and five days thereafter to elapse before the ceremony may be performed. This has had the effect of shutting out a very large proportion of marriages of non-residents, as may be readily seen in the following table:

YEAR.	Total No. of Marriages.	Residents of Milwaukee.	Residents of Chicago and Suburbs.	Other Places.
1898	4206	2465	1502	239
1899	2810	2240	434	136

On the following pages will be found various tables setting forth in detail Analyses of the Vital Statistics as recorded during the year.

Respectfully submitted,

J. W. COON, M. D.,

Registrar of Vital Statistics.

STATISTICAL TABLES.

TABLE No. 1

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the year 1899. The Annual Death Rate per 1,000 for the year was 13.48 on an estimated population of 285,000. For the year 1898 there were 3,338 deaths, representing an annual Death Rate of 11.92 per 1,000 population.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.											
		Male.	Female.	Single.	Married.	Widowed.	Milwaukee.	U. S. other than Mil.	Foreign.	Under 1 year	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.
TOTAL—All Causes	3843	2065	1778	2144	1175	524	1963	484	1396	1113	428	139	175	285	301	277	281	323	326	175	20
General Diseases	1101	568	533	529	449	123	462	193	446	71	153	62	90	170	131	118	111	97	70	25	3
Typhoid Fever	47	27	20	22	24	1	17	15	15	----	1	1	10	17	9	2	4	2	1	----	----
Measles	26	15	11	26	----	----	26	----	----	8	15	3	----	----	----	----	----	----	----	----	----
Scarlet Fever	36	23	13	35	1	----	35	1	----	2	20	13	----	1	----	----	----	----	----	----	----
Whooping Cough	9	2	7	9	----	----	8	1	----	6	3	----	----	----	----	----	----	----	----	----	----
Diphtheria and Membranous Croup	109	66	43	107	1	1	93	16	----	4	63	31	9	1	1	----	----	----	----	----	----
Other Epidemic Diseases	110	47	63	33	46	31	30	15	65	14	7	2	3	4	6	7	10	18	23	13	3
Pulmonary Tuberculosis	372	188	184	162	185	25	131	80	161	4	9	4	43	116	81	50	35	17	12	1	----
Other Tubercular Diseases	109	60	49	83	24	2	80	17	12	16	34	7	15	17	11	5	3	----	1	----	----
Cancer	194	95	99	13	129	52	10	31	153	1	----	----	1	3	12	41	47	53	28	8	----
Other General Diseases	89	45	44	39	39	11	32	17	40	16	1	1	9	11	11	13	12	7	5	3	----
Local Diseases	2525	1308	1207	1515	628	382	1430	241	854	1036	251	67	69	80	117	131	149	215	247	146	17
Meningitis	123	81	42	105	15	3	95	8	20	41	38	17	7	3	7	3	2	3	2	----	----
Apoplexy	120	61	59	11	68	41	10	17	93	1	1	1	2	1	7	11	18	27	33	15	3
Other Dis's of Brain and Membranes	40	20	20	14	15	11	13	1	26	6	2	2	3	1	4	1	6	4	7	4	----
Paralysis	11	6	5	2	6	3	3	5	3	----	1	----	----	1	----	2	2	2	3	----	----
Convulsions	144	82	62	144	----	----	144	----	----	123	21	----	----	----	----	----	----	----	----	----	----
Other Nervous Diseases	14	8	6	7	3	4	7	1	6	4	1	1	----	1	----	2	1	3	1	----	----

Local Diseases—Continued.																					
Organic Heart Diseases	228	110	118	44	117	67	37	45	146	6	4	6	16	4	18	27	29	49	51	17	1
Other Dis's of Circulatory System	38	26	12	4	21	13	1	6	31	1	----	----	----	1	2	3	5	14	8	3	1
Bronchitis	173	81	92	108	26	39	104	6	63	81	22	4	----	1	----	2	3	15	19	26	----
Pneumonia	286	166	120	158	89	39	147	26	113	70	48	11	10	16	23	18	27	33	19	7	4
Broncho-pneumonia	57	29	28	44	9	4	40	2	15	30	12	2	----	----	----	1	3	1	5	3	----
Asthma	22	9	13	----	10	12	----	1	21	----	----	----	----	----	1	3	1	5	7	4	1
Pleurisy	11	6	5	6	4	1	4	2	5	----	2	2	1	1	----	1	----	2	2	----	----
Other Respiratory Diseases	41	20	21	25	9	7	25	2	14	10	10	1	2	1	4	2	----	4	5	2	----
Gastritis	54	28	26	42	6	6	40	3	11	30	11	1	----	1	----	2	----	1	6	2	----
Diarrhœal Diseases	400	204	196	388	5	7	368	16	16	319	62	5	2	----	----	1	1	1	5	4	----
Appendicitis and Peritonitis	68	28	40	39	23	6	25	22	21	2	1	7	17	12	13	6	2	5	3	----	----
Hernia and Intest. Obstruction	28	14	14	7	13	8	6	3	19	6	----	----	----	----	----	4	5	8	3	2	----
Cirrhos's of Liver	24	18	6	----	16	8	2	--	22	----	----	----	----	----	1	3	9	5	4	2	----
Other Digestive Diseases	64	35	29	38	19	7	37	4	23	27	4	1	2	3	2	8	4	5	5	3	----
Nephritis	132	79	53	40	59	3	27	33	72	4	7	6	5	7	7	21	25	19	20	11	----
Other Urinary Diseases	29	26	3	1	20	8	----	8	21	----	----	----	----	----	1	2	5	3	14	4	----
Diseases of Female Generative System	16	----	16	5	11	----	5	5	6	----	----	----	----	9	3	4	----	----	----	----	----
Puerperal Septicæmia	25	----	25	1	24	----	9	5	11	----	----	----	2	12	11	----	----	----	----	----	----
Other Diseases of Pregnancy	20	----	20	2	18	----	5	5	10	----	----	----	----	5	13	2	----	----	----	----	----
Diseases of Skin and Cellular Tissue	36	16	20	27	7	2	26	3	7	25	2	----	----	----	----	2	1	2	1	3	----
Locomotor System	----	----	----	----	----	----	----	--	----	----	----	----	----	----	----	----	----	--	----	----	----
Malformations	8	4	4	8	----	----	8	----	----	8	----	----	----	----	----	----	----	----	----	----	----
Congenital Debility	244	132	112	244	----	----	242	2	----	242	2	----	----	----	----	----	--	----	----	----	----
Senile Debility	69	29	40	1	15	53	----	10	59	----	----		----	----	----	----	--	4	24	34	7
Violence	207	172	35	95	95	17	66	48	93	5	21	10	16	34	52	27	20	10	8	4	----
Suicides	49	40	9	14	28	7	9	15	25	----	----	----	2	11	14	8	5	4	4	1	----
Accidents	155	130	25	81	64	10	57	32	66	5	21	10	14	22	37	19	15	5	4	3	----
Homicides	3	2	1		3	----	----	1	2	----	----	----	----	1	1	--	--	1	----		--
Other Causes and Ill-Defined	10	7	3	5	3	2	5	2	3	1	3	--	----	1	1	1	1	1	1	----	----

TABLE No. 2

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of January, 1899.

The Annual Death Rate for the month was 18.20 on an estimated population of 280,000.

During the month there were 148 deaths more than for the corresponding month of 1898.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.											
		Male.	Female.	Single.	Married.	Widowed.	Milwaukee.	U. S. other than Mil.	Foreign.	Under 1 year	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.
TOTAL—All Causes	432	226	206	207	144	81	190	55	187	101	46	9	17	28	42	22	43	43	49	26	6
General Diseases	168	86	82	67	72	29	61	27	80	13	20	4	10	19	27	7	18	21	18	8	3
Typhoid Fever	2	1	1		2				2						2						
Measles																					
Scarlet Fever																					
Whooping Cough	1	1		1			1			1											
Diphtheria and Membranous Croup	16	10	6	16			14	2			11	4	1								
Other Epidemic Diseases	66	30	36	20	27	19	18	9	39	9	5		2	3	3	1	6	12	15	7	3
Pulmonary Tuberculosis	48	25	23	19	26	3	19	8	21		3		6	12	12	4	6	3	2		
Other Tubercular Diseases	5	3	2	2	3		2	2	1		1			2	2						
Cancer	13	8	5	1	8	4	1	1	11						3		4	5		1	
Other General Diseases	17	8	9	8	6	3	6	5	6	3			1	2	5	2	2	1	1		
Local Diseases	247	127	120	130	66	51	124	24	99	88	24	4	6	4	13	13	23	22	29	18	3
Meningitis	4	2	2	3	1		3		1	2	1					1					
Apoplexy	9	4	5		5	4		1	8							2	2		2	2	1
Other Dis's of Brain and Membranes	7	3	4	3	1	3	4		3	2		1				1	1	1	1		
Paralysis	1	1		1			1				1										
Convulsions	18	12	6	18			18			14	4										
Other Nervous Diseases	2	1	1	1		1	1		1					1			1				

Local Diseases—Continued.																					
Organic Heart Diseases	22	7	15	4	14	4	3	6	13	1			1		5	2	3	5	5		
Other Dis's of Circulatory System	2	2		1		1		1	1									1	1		
Bronchitis	35	19	16	18	5	12	19		16	16	3						1	3	6	6	
Pneumonia	48	25	23	31	8	9	30	4	14	13	11	3	2	2	3	1	2	6	1	2	2
Broncho-pneumonia	13	9	4	7	6		6	1	6	7						1	3		2		
Asthma	5	3	2		3	2			5						1			2	2		
Pleurisy	1		1		1				1							1					
Other Respiratory Diseases	1		1			1			1										1		
Gastritis	3	1	2	2		1	2		1	2									1		
Diarrhœal Diseases	13	5	8	12		1	11	1	1	8	4								1		
Appendicitis and Peritonitis	5	2	3	3	2		1	2	2				2	1	1		1				
Hernia and Intest. Obstruction																					
Cirrhosis of Liver																					
Other Digestive Diseases																					
Nephritis	18	11	7	3	11	4	1	6	11				1			2	8	2	4	1	
Other Urinary Diseases	3	2	1		2	1			3							1		1		1	
Diseases of Female Generative System																					
Puerperal Septicæmia	2		2		2			1	1						2						
Other Diseases of Pregnancy	1		1		1		1								1						
Diseases of Skin and Cellular Tissue	7	4	3	3	3	1	3	1	3	3						1	1	1		1	
Locomotor System																					
Malformations																					
Congenital Debility	20	10	10	20			20			20											
Senile Debility	7	4	3		1	6			7										2	5	
Violence	17	13	4	10	6	1	5	4	8		2	1	1	5	2	2	2		2		
Suicides	7	6	1	3	3	1		4	3					3	1	1	1		1		
Accidents	10	7	3	7	3		5		5		2	1	1	2	1	1	1		1		
Homicides																					
Other Causes and Ill-Defined																					

TABLE No. 3

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of February, 1899.

The Annual Death Rate for the month was 15.78 on an estimated population of 280,000.

During the month there were 120 deaths more than for the corresponding month of 1898.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.											
		Male.	Female.	Single.	Married.	Widowed.	Milwaukee.	U. S. other than Mil.	Foreign.	Under 1 year	1 to 5.	5 to 10.	10 to 20.	20 to 30	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.
TOTAL—All Causes	340	185	155	186	103	51	174	33	133	97	41	10	13	21	25	31	14	32	30	24	2
General Diseases	100	48	52	49	34	17	44	8	48	11	18	4	4	11	6	13	7	14	6	6	
Typhoid Fever	2		2	1	1		1		1					1		1					
Measles	1	1		1			1			1											
Scarlet Fever	2	1	1	2			2				2										
Whooping Cough																					
Diphtheria and Membranous Croup	10	7	3	10			10			1	8	1									
Other Epidemic Diseases	29	8	21	11	10	8	9	2	18	5	2	1	1	1	2	3	2	6	1	5	
Pulmonary Tuberculosis	23	12	11	12	9	2	8	4	11	1	1	1	3	6	4	3		3	1		
Other Tubercular Diseases	9	3	6	8		1	8		1	1	5	1		1			1				
Cancer	14	8	6		10	4	1		13					1		2	3	4	3	1	
Other General Diseases	10	8	2	4	4	2	4	2	4	2				1		4	1	1	1		
Local Diseases	223	122	100	127	62	33	124	21	77	86	20	6	8	7	15	14	6	18	24	16	2
Meningitis	10	9	1	10			10			2	5	2	1								
Apoplexy	8	4	4		5	3		1	7								1	2	3	2	
Other Dis's of Brain and Membranes	3		3		2	1			3					1	1				1		
Paralysis																					
Convulsions	17	14	3	17			17			16	1										
Other Nervous Diseases	2		2	1		1	1	1			1					1					

Local Diseases—Continued.																					
Organic Heart Diseases	16	8	8	3	10	3	3	4	9			1	2			3	1	4	3	2	
Other Dis's of Circulatory System	5	3	2	1	3	1		1	4						1	2		2			
Bronchitis	29	15	14	17	6	6	17	1	11	14	3						1	2	3	6	
Pneumonia	37	25	12	16	14	7	15	3	19	8	4		1	2	7	2	1	6	4	1	1
Broncho-pneumonia	8	3	5	8			8			6	1	1									
Asthma	5	2	3		2	3			5							1			2	1	1
Pleurisy	3	2	1	3			2	1			1	1	1								
Other Respiratory Diseases	4	3	1	2	1	1	2		2	1			1					1	1		
Gastritis	4	1	3	4			4			4											
Diarrhœal Diseases	9	5	4	9			8	1		7	2										
Appendicitis and Peritonitis	6	1	5	4	2		5		1			1	1	2	1	1					
Hernia and Intest. Obstruction	2	1	1		1	1		1	1							1			1		
Cirrhosis of Liver	3	2	1		3		1		2							1	1		1		
Other Digestive Diseases	7	4	3	7			7			5	2										
Nephritis	10	9	1	2	6	2	2	1	7	1				1	1	2	1	1	2	1	
Other Urinary Diseases	2	2			2			1	1										2		
Diseases of Female Generative System	2		2	1	1			2						1	1						
Puerperal Septicæmia	4		4		4			1	3				1		3						
Other Diseases of Pregnancy																					
Diseases of Skin and Cellular Tissue	6		6	6			6			6											
Locomotor System																					
Malformations																					
Congenital Debility	16	8	8	16			16			16											
Senile Debility	4	1	3			4		2	2										1	3	
Violence	17	15	2	9	7	1	5	4	8		2		1	3	4	4	1			2	
Suicides	5	5		2	3		2	2	1					2	1	1	1				
Accidents	12	10	2	7	4	1	3	2	7		2		1	1	3	3				2	
Homicides																					
Other Causes and Ill-Defined	1		1	1			1				1										

TABLE No. 4

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of March, 1899.

The Annual Death Rate for the month was 13.44 on an estimated population of 280,000.

During the month there were 48 deaths more than for the corresponding month of 1898.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.											
		Male.	Female.	Single.	Married.	Widowed.	Milwaukee.	U. S. other than Mil.	Foreign.	Under 1 year	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.
TOTAL—All Causes	319	163	156	168	100	51	157	40	122	83	30	13	13	31	19	22	28	28	37	13	2
General Diseases	104	62	42	45	51	8	43	16	45	6	11	7	6	21	9	13	12	6	8	5	----
Typhoid Fever	2	2	----	----	2	----	1	----	1	----	--	----	----	2	----	----	----	----	----	----	----
Measles	2	2	----	2	----	----	2	----	----	1	1	----	----	----	----	----	----	----	----	----	----
Scarlet Fever	1	1	----	1	----	----	1	----	----	----	----	1	----	----	----	----	----	----	----	----	----
Whooping Cough	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Diphtheria and Membranous Croup	12	8	4	12	----	----	11	1	----	1	7	4	----	----	----	----	----	----	----	----	----
Other Epidemic Diseases	5	4	1	1	3	1	1	----	4	----	----	1	----	----	----	----	----	----	3	1	----
Pulmonary Tuberculosis	43	26	17	17	26	----	16	10	17	1	1	----	4	17	6	5	6	1	2	----	----
Other Tubercular Diseases	10	6	4	8	2	----	8	----	2	2	2	1	1	2	1	1	----	----	----	----	----
Cancer	21	10	11	2	15	4	2	2	17	----	----	----	----	----	1	6	5	5	1	3	----
Other General Diseases	8	3	5	2	3	3	1	3	4	1	----	----	1	----	1	1	1	----	2	1	----
Local Diseases	204	91	113	116	48	40	109	23	72	75	17	5	7	8	10	9	14	22	27	8	2
Meningitis	10	6	4	9	1	----	8	1	1	3	4	----	2	----	----	----	1	----	----	----	----
Apoplexy	12	2	10	2	6	4	1	2	9	----	----	1	----	----	----	----	1	7	2	----	1
Other Dis's of Brain and Membranes	3	1	2	1	1	1	1	----	2	----	----	1	----	----	----	----	1	----	----	1	----
Paralysis	2	----	2	----	1	1	----	1	1	----	----	----	----	----	----	1	----	----	1	----	----
Convulsions	10	5	5	10	----	----	10	----	----	10	----	----	----	----	----	----	----	----	----	----	----
Other Nervous Diseases	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Local Diseases—Continued.																					
Organic Heart Diseases	16	4	12	6	6	4	3	5	8	1			2		2	3	2	2	4		
Other Dis's of Circulatory System	4	2	2	1		3	1	1	2	1								2	1		
Bronchitis	19	7	12	15	1	3	15		4	11	4						1	1	1	1	
Pneumonia	30	18	12	18	7	5	16	2	12	11	4	1			2		3	4	5		
Broncho-pneumonia	7	2	5	7			6	1		4	2	1									
Asthma	1		1		1				1										1		
Pleurisy	1		1	1			1				1										
Other Respiratory Diseases	7	3	4	3	3	1	4	1	2	3				1	1	1		1			
Gastritis	3	2	1			3			3									1	1	1	
Diarrhœal Diseases	14	8	6	13		1	13		1	10	2	1							1		
Appendicitis and Peritonitis	6	1	5	3	1	2	2	2	2				1	2	1		1		1		
Hernia and Intest. Obstruction	4	4		1	1	2			4								1	1		2	
Cirrhosis of Liver	3	3			2	1	1		2							1		1	1		
Other Digestive Diseases	5	3	2	2	3		3		2	1			1		1		1		1		
Nephritis	8	3	5	2	3	3	1	3	4					1		2	2		2	1	
Other Urinary Diseases	3	3			3				3									1	2		
Diseases of Female Generative System	1		1	1					1					1							
Puerperal Septicæmia	6		6	1	5		3	1	2				1	3	2						
Other Diseases of Pregnancy	2		2		2			1	1						1	1					
Diseases of Skin and Cellular Tissue																					
Locomotor																					
Malformations	1	1		1			1			1											
Congenital Debility	19	11	8	19			19			19											
Senile Debility	7	2	5		1	6		2	5									1	3	2	1
Violence	10	9	1	7	1	2	5	1	4	2	2	1		2			2		1		
Suicides																					
Accidents	10	9	1	7	1	2	5	1	4	2	2	1		2			2		1		
Homicides																					
Other Causes and Ill Defined	1	1				1			1										1		

TABLE No. 5

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of April, 1899.

The Annual Death Rate for the month was 14.20 on an estimated population of 280,000.

During the month there were 53 deaths more than for the corresponding month of 1898.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.											
		Male.	Female.	Single.	Married.	Widowed.	Milwaukee.	U. S. other than Mil.	Foreign.	Under 1 year	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.
TOTAL—All Causes	326	188	138	184	104	38	182	32	112	108	35	8	8	19	29	24	29	24	27	14	1
General Diseases	87	48	39	41	36	10	44	10	33	9	11	4	3	11	14	10	15	4	4	2	
Typhoid Fever	1		1	1			1						1								
Measles	4	3	1	4			4			1	3										
Scarlet Fever	3	2	1	3			3			1		2									
Whooping Cough	1	1		1			1			1											
Diphtheria and Membranous Croup	4	3	1	4			4				2	1	1								
Other Epidemic Diseases	5	4	1		3	2	2	1	2							2	2		1		
Pulmonary Tuberculosis	39	16	23	12	21	6	15	4	20	1	1			9	13	5	5	4		1	
Other Tubercular Diseases	12	9	3	9	2	1	8	2	2	2	5	1	1			1	1		1		
Cancer	11	4	7	2	8	1	1	3	7	1					1		6		2	1	
Other General Diseases	7	6	1	5	2		5		2	2				2		2	1				
Local Diseases	230	132	98	140	62	28	136	20	74	98	24	4	5	7	11	14	12	20	22	12	1
Meningitis	17	11	6	16	1		15	1	1	6	6	4		1							
Apoplexy	12	9	3	2	6	4		3	9						2		4	1	2	3	
Other Dis's of Brain and Membranes	6	2	4	3	2	1	3		3	1	1		1						1	2	
Paralysis																					
Convulsions	15	9	6	15			15			12	3										
Other Nervous Diseases	1	1			1				1										1		

Local Diseases—Continued.																					
Organic Heart Diseases	25	12	13	5	15	5	4	6	15	1	1		2	1	1	4	3	8	3	1	
Other Dis's of Circulatory System	3	2	1		2	1			3							1			1		1
Bronchitis	15	10	5	8	3	4	7	2	6	7	1					1		2	2	2	
Pneumonia	34	25	9	18	13	3	18	3	13	8	6		1		4	4	4	3	3	1	
Broncho-pneumonia	9	6	3	7	1	1	7		2	6	1							1	1		
Asthma	1		1			1			1										1		
Pleurisy	3	3			2	1			3									2	1		
Other Respiratory Diseases	1	1			1				1										1		
Gastritis	8	6	2	6	1	1	6		2	5	1								2		
Diarrhœal Diseases	20	9	11	20			20			18	2										
Appendicitis and Peritonitis	4		4	1	3		1	2	1	1				1	2						
Hernia and Intest. Obstruction	1		1	1			1			1											
Cirrhosis of Liver	3	1	2		3				3								1	1	1		
Other Digestive Diseases	7	4	3	7			7			6	1										
Nephritis	10	4	6	3	4	3	2	2	6				1		2	3		3	1		
Other Urinary Diseases	1	1		1				1								1					
Diseases of Female Generative System	3		3		3		2		1					3							
Puerperal Septicæmia	1		1		1		1							1							
Other Diseases of Pregnancy																					
Diseases of Skin and Cellular Tissue	3	2	1	3			3			3											
Locomotor System																					
Malformations																					
Congenita Debility	24	14	10	24			24			23	1										
Senile Debility	3		3			3			3										1	2	
Violence	9	8	1	3	6		2	2	5	1				1	4		2		1		
Suicides	4	4		1	3			1	3					1	1		1		1		
Accidents	5	4	1	2	3		2	1	2	1					3		1				
Homicides																					
Other Causes and Ill-Defined																					

TABLE No. 6

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of May, 1899.

The Annual Death Rate for the month was 13.02 on an estimated population of 280,000.

During the month there were 47 deaths more than for the corresponding month of 1898.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.											
		Male.	Female.	Single.	Married.	Widowed.	Milwaukee.	U. S. other than Mil.	Foreign.	Under 1 year	1 to 5.	5 to 10.	10 to 20.	20 to 30	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.
TOTAL—All Causes	309	171	138	155	107	47	125	60	124	66	31	11	17	29	27	28	24	25	37	13	1
General Diseases	90	50	40	41	40	9	29	25	36	3	9	4	6	17	16	12	9	5	7	2	
Typhoid Fever	4	2	2	3	1		2	1	1		1	1		1			1				
Measles	3	2	1	3			3				2	1									
Scarlet Fever																					
Whooping Cough																					
Diphtheria and Membranous Croup	3	1	2	3			2	1			2	1									
Other Epidemic Diseases	3	1	2	1	2			1	2							1			2		
Pulmonary Tuberculosis	44	30	14	20	21	3	11	15	18			1	3	14	14	6	4	1	1		
Other Tubercular Diseases	10	6	4	7	3		7	3		1	4		1	1	1	1	1				
Cancer	12	5	7		9	3	1	1	10							3	1	4	4		
Other General Diseases	11	3	8	4	4	3	3	3	5	2			2	1	1	1	2			2	
Local Diseases	203	109	94	106	59	38	91	29	83	63	19	6	9	8	9	15	13	19	30	11	1
Meningitis	14	11	3	14			12		2	3	7	1	2			1					
Apoplexy	15	6	9	1	8	6	2	5	8				1		1	2	1	3	6	1	
Other Dis's of Brain and Membranes	4	2	2	2	1	1	1	1	2	1								2	1		
Paralysis																					
Convulsions	10	7	3	10			10			9	1										
Other Nervous Diseases																					

Local Diseases – Continued.																					
Organic Heart Diseases	29	18	11	4	11	14	3	5	21		2		2	1	1	5		5	9	4	
Other Dis's of Circulatory System	2	1	1		1	1			2								1	1			
Bronchitis	10	5	5	5	2	3	5		5	4	1							1	2	2	
Pneumonia	32	15	17	16	14	2	15	3	14	8	3	2	1	3	3	2	5	3	2		
Broncho-pneumonia	4	2	2	4			3		1	2	2										
Asthma	2		2		1	1			2									1		1	
Pleurisy	2	1	1	2			1	1				1		1							
Other Respiratory Diseases	4	2	2	4			3	1		2	1								1		
Gastritis	5	2	3	3	2		2	1	2	3						1			1		
Diarrhœal Diseases	14	9	5	14			12	2		12	2										
Appendicitis and Peritonitis	6	1	5	4	2		1	4	1	1			3		2						
Hernia and Intest. Obstruction	5	2	3	2	3		2		3	2						1	1	1			
Cirrhosis of Liver	3	2	1		3				3								1	1	1		
Other Digestive Diseases	5	3	2	3		2	2	1	2	1		1		1				1	1		
Nephritis	9	8	1	2	6	1		4	5			1		1		3	3			1	
Other Urinary Diseases	1		1		1				1								1				
Diseases of Female Generative System																					
Puerperal Septicæmia	1		1		1		1								1						
Other Diseases of Pregnancy	1		1		1		1								1						
Diseases of Skin and Cellular Tissue																					
Locomotor System																					
Malformations	1	1		1			1			1											
Congenital Debility	14	7	7	14			14			14											
Senile Debility	9	3	6		2	7			9										6	2	1
Violence	16	12	4	8	8		5	6	5		3	1	2	4	2	1	2	1			
Suicides	3	2	1	2	1			2	1				1	1		1					
Accidents	13	10	3	6	7		5	4	4		3	1	1	3	2		2	1			
Homicides																					
Other Causes and Ill-Defined	1	1		1				1						1							

TABLE No. 7

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of June, 1899.

The Annual Death Rate for the month was 11.41 on an estimated population of 280,000.

During the month there were 17 deaths more than for the corresponding month of 1898.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.											
		Male.	Female.	Single.	Married.	Widowed.	Milwaukee.	U. S. other than Mil.	Foreign.	Under 1 year	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.
TOTAL—All Causes	262	148	114	153	81	28	146	32	84	75	38	10	16	17	21	19	18	18	15	13	2
General Diseases	66	37	29	34	28	4	32	13	21	3	8	5	11	11	10	10	6	1		1	
Typhoid Fever	6	5	1	2	4		2	3	1				1	3	2						
Measles	5	3	2	5			5			1	3	1									
Scarlet Fever	1	1		1			1					1									
Whooping Cough																					
Diphtheria and Membranous Croup	3	3		3			1	2				2	1								
Other Epidemic Diseases	1		1		1			1							1						
Pulmonary Tuberculosis	17	8	9	8	8	1	9	2	6		1		3	4	4	4	1				
Other Tubercular Diseases	13	7	6	9	4		10	2	1	1	4	1	4	2	1						
Cancer	14	7	7	2	9	3		3	11					1	1	5	5	1		1	
Other General Diseases	6	3	3	4	2		4		2	1			2	1	1	1					
Local Diseases	176	94	82	108	45	23	105	15	56	72	25	4	2	6	8	6	9	15	15	12	2
Meningitis	11	6	5	9	1	1	7	1	3	3	4	1		1	1		1				
Apoplexy	7	4	3	1	4	2	1	2	4						1		1	2	1	1	1
Other Dis's of Brain and Membranes	3	2	1		2	1	1		2						1		1		1		
Paralysis	2	2		1	1		1	1						1				1			
Convulsions	6	2	4	6			6			5	1										
Other Nervous Diseases	2		2	1	1		1		1	1								1			

Local Diseases—Continued.																				
Organic Heart Diseases	20	11	9	2	15	3	2	3	15			1	1	1		1	3	4	7	2
Other Dis's of Circulatory System	3	2	1		1	2			3									1		2
Bronchitis	8	6	2	7		1	7		1	5	2									1
Pneumonia	18	11	7	14	2	2	12		6	5	5	1	1	1		1	1	1	1	1
Broncho-pneumonia	1		1	1			1				1									
Asthma																				
Pleurisy																				
Other Respiratory Diseases	6	4	2	4		2	4		2	2	2							1		1
Gastritis	4	1	3	3	1		3	1			3			1						
Diarrhœal Diseases	31	12	19	29	2		28		3	25	4					1		1		
Appendicitis and Peritonitis	2		2	2			1	1			1	1								
Hernia and Intest. Obstruction	1		1			1			1								1			
Cirrhosis of Liver	1	1				1			1						1					
Other Digestive Diseases	4	4		2	1	1	3	1		2					1				1	
Nephritis	10	6	4	1	6	3	1	2	7		1			1		2	1	3	1	1
Other Urinary Diseases	4	4			3	1		2	2										3	1
Diseases of Female Generative System																				
Puerperal Septicæmia																				
Other Diseases of Pregnancy	3		3		3		2		1						3					
Diseases of Skin and Cellular Tissue	3	2	1	2	1		2		1	1	1					1				
Locomotor System																				
Malformations	1		1	1			1			1										
Congenital Debility	22	12	10	22			21	1		22										
Senile Debility	3	2	1		1	2			3										2	1
Violence	19	16	3	11	7	1	9	3	7		5	1	3		3	3	2	2		
Suicides	3	3			2	1		1	2						1		1	1		
Accidents	15	13	2	11	4		9	2	4		5	1	3		2	3	1			
Homicides	1		1		1				1									1		
Other Causes and Ill-Defined	1	1			1			1									1			

TABLE No. 8

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of July, 1899.

The Annual Death Rate for the month was 14.32 on an estimated population of 285,000.

During the month there were 98 deaths more than for the corresponding month of 1898.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.											
		Male.	Female.	Single.	Married.	Widowed.	Milwaukee.	U. S. other than Mil.	Foreign.	Under 1 year	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.
TOTAL—All Causes	346	182	164	217	97	32	192	39	115	126	38	10	13	33	32	19	22	21	16	15	1
General Diseases	70	31	39	38	25	7	26	14	30	1	9	2	10	16	12	8	5	5	2		
Typhoid Fever	3	1	2	3			1	1	1				1	2							
Measles	2		2	2			2				1	1									
Scarlet Fever	2	1	1	2			2				1	1									
Whooping Cough	1		1	1				1			1										
Diphtheria and Membranous Croup	4	3	1	3	1		4				2		1	1							
Other Epidemic Diseases																					
Pulmonary Tuberculosis	24	10	14	12	11	1	5	8	11				2	10	6	3	2		1		
Other Tubercular Diseases	12	6	6	9	3		7	2	3		3		4	2	2	1					
Cancer	16	8	8	2	8	6	1	1	14					1	2	4	3	5	1		
Other General Diseases	6	2	4	4	2		4	1	1	1	1		2		2						
Local Diseases	245	122	123	165	55	25	156	20	69	125	25	6	2	8	12	7	15	16	13	15	1
Meningitis	12	8	4	7	4	1	7		5	3	1	3			3			1	1		
Apoplexy	7	3	4		4	3	1		6						1		1	2	1	2	
Other Dis's of Brain and Membranes	5	4	1	2	3		1		4		1		1		1		1		1		
Paralysis																					
Convulsions	8	5	3	8			8			6	2										
Other Nervous Diseases																					

Local Diseases—Continued.																					
Organic Heart Diseases	13	7	6	2	7	4	2	3	8			1			1	1	4	2	4		
Other Dis's of Circulatory System	3	2	1		2	1			3					1					2		
Bronchitis	11	4	7	8		3	8		3	6	2									3	
Pneumonia	12	8	4	9	2	1	9		3	4	4	1				1		2			
Broncho-pneumonia	1		1	1			1				1										
Asthma	1	1				1			1											1	
Pleurisy																					
Other Respiratory Diseases	3	2	1	2	1		2		1	1	1				1						
Gastritis	4	2	2	3		1	3		1	2		1								1	
Diarrhœal Diseases	87	42	45	85	2		79	6	2	75	10						1			1	
Appendicitis and Peritonitis	6	4	2	4	2		1	2	3				1	2		1		1	1		
Hernia and Intest. Obstruction	6	3	3	2	1	3	2		4	2						1	1	2			
Cirrhosis of Liver	2	1	1		1	1			2									1		1	
Other Digestive Diseases	8	3	5	3	4	1	4		4	3						1	2	1		1	
Nephritis	10	4	6	4	5	1	2	4	4		2			1			3	3		1	
Other Urinary Diseases	6	6			5	1		1	5								2	1	2	1	
Diseases of Female Generative System	3		3	1	2		1	1	1						1	2					
Puerperal Septicæmia	4		4		4		1	1	2					3	1						
Other Diseases of Pregnancy	4		4		4		1		3					1	3						
Diseases of Skin and Cellular Tissue																					
Locomotor System																					
Malformations																					
Congenital Debility	24	10	14	24			23	1		23	1										
Senile Debility	5	3	2		2	3		1	4										1	3	1
Violence	29	27	2	13	16		9	5	15		3	2	1	9	8	3	2		1		
Suicides	4	3	1	2	2		1	1	2				1	1	2						
Accidents	24	23	1	11	13		8	3	13		3	2		7	6	3	2		1		
Homicides	1	1			1			1						1							
Other Causes and Ill-Defined	2	2		1	1		1		1		1					1					

TABLE No. 9

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of August, 1899.

The Annual Death Rate for the month was 13.99 on an estimated population of 285,000.

During the month there were 15 deaths less than for the corresponding month of 1898.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.											
		Male.	Female.	Single,	Married.	Widowed.	Milwaukee.	U. S. other than Mil.	Foreign.	Under 1 year	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.
TOTAL—All Causes	338	174	164	221	79	38	215	29	94	142	35	10	13	22	17	24	19	29	19	6	2
General Diseases	62	28	34	24	33	5	23	11	28	3	5	1	7	13	4	9	8	9	3		
Typhoid Fever	4	2	2	3	1		2	1	1				2	1	1						
Measles																					
Scarlet Fever	1	1		1			1				1										
Whooping Cough																					
Diphtheria and Membranous Croup	4	1	3	4			4				3		1								
Other Epidemic Diseases																					
Pulmonary Tuberculosis	26	10	16	8	18		7	7	12				4	10	3	4	3	2			
Other Tubercular Diseases	5	3	2	5			5			1	1	1		2							
Cancer	18	8	10	1	12	5	2	3	13							5	5	6	2		
Other General Diseases	4	3	1	2	2		2		2	2								1	1		
Local Diseases	254	129	125	182	44	28	181	16	57	138	29	6	4	6	8	12	11	17	16	5	2
Meningitis	11	5	6	8	2	1	8	1	2	3	4	1			1	1			1		
Apoplexy	4	3	1		2	2			4								1	2	1		
Other Dis's of Brain and Membranes	1	1			1				1									1			
Paralysis	4	2	2		3	1	1	2	1							1	1	1	1		
Convulsions	13	5	8	13			13			11	2										
Other Nervous Diseases																					

Local Diseases—Continued.																				
Organic Heart Diseases	16	8	8	2	6	8	3	2	11	1		1			2		4	3	4		1
Other Dis's of Circulatory System	4	3	1		4			2	2						1		1	2			
Bronchitis	4	3	1	3		1	3		1	2				1				1			
Pneumonia	7	4	3	4	2	1	3		4	1	1			2	1		1	1			
Broncho-pneumonia	5	2	3	4		1	4		1	4									1		
Asthma	1	1			1				1							1					
Pleurisy																					
Other Respiratory Diseases	2	1	1	1	1		1		1		1								1		
Gastritis	8	3	5	7	1		6	1	1	4	3					1					
Diarrhœal Diseases	98	47	51	96	1	1	94	2	2	80	14	2								2	
Appendicitis and Peritonitis	5	2	3	2	2	1	3		2				2		2	1					
Hernia and Intest. Obstruction	1	1			1			1										1			
Cirrhosis of Liver	1	1			1				1							1					
Other Digestive Diseases	11	6	5	7	3	1	7		4	5	1		1			2	1	1			
Nephritis	17	9	8	8	3	6	6	3	8	1	2	2	1		1	1	2	2	3	2	
Other Urinary Diseases	1	1				1			1										1		
Diseases of Female Generative System	3		3		3		2		1					1		2					
Puerperal Septicæmia	2		2		2		1		1					2							
Other Diseases of Pregnancy	1		1		1				1							1					
Diseases of Skin and Cellular Tissue	4	3	1	2	2		1	2	1	1	1								1	1	
Locomotor																					
Malformations																					
Congenital Debility	25	15	10	25			25			25											
Senile Debility	5	3	2		2	3			5									2	2		1
Violence	18	15	3	13	1	4	8	2	8			3	2	3	4	3		2		1	
Suicides	5	3	2	3		2	2		3					2	1			1		1	
Accidents	13	12	1	10	1	2	6	2	5			3	2	1	3	3		1			
Homicides																					
Other Causes and Ill Defined	4	2	2	2	1	1	3		1	1	1				1			1			

TABLE No. 10

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of September, 1899.

The Annual Death Rate for the month was 11.21 on an estimated population of 285,000.

During the month there were 62 deaths less than for the corresponding month of 1898.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.											
		Male.	Female.	Single.	Married.	Widowed.	Milwaukee.	U. S. other than Mil.	Foreign.	Under 1 year	1 to 5.	5 to 10.	10 to 20.	20 to 30	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.
TOTAL—All Causes	262	137	125	172	60	30	147	39	76	96	30	8	22	21	15	14	19	14	17	5	1
General Diseases	76	34	42	40	29	7	32	13	31	3	12	4	13	13	4	9	10	4	4		
Typhoid Fever	5	3	2	2	3		2	2	1				1	1	1		2				
Measles																					
Scarlet Fever	3	2	1	3			3				2	1									
Whooping Cough	2		2	2			2				2										
Diphtheria and Membranous Croup	10	5	5	10			9	1			6	3	1								
Other Epidemic Diseases																					
Pulmonary Tuberculosis	32	14	18	19	10	3	12	5	15	1	1		11	9	1	4	2	1	2		
Other Tubercular Diseases	4	2	2	3	1		2	2		1	1			2							
Cancer	15	6	9		11	4	1	2	12						1	5	4	3	2		
Other General Diseases	5	2	3	1	4		1	1	3	1				1	1		2				
Local Diseases	167	88	79	127	20	20	110	21	36	93	16	4	7	7	4	3	6	9	13	4	1
Meningitis	4	3	1	3	1		2		2	1	1	1						1			
Apoplexy	5	5		1	3	1		1	4					1				1	3		
Other Dis's of Brain and Membranes	1	1		1			1			1											
Paralysis																					
Convulsions	15	8	7	15			15			14	1										
Other Nervous Diseases	1	1		1			1			1											

Local Diseases—Continued.																				
Organic Heart Diseases	16	6	10	5	4	7	4	2	10	1			2	1	2		1	4	4	1
Other Dis's of Circulatory System	2	1	1		1	1		1	1										1	1
Bronchitis	7	2	5	6	1		4	2	1	4	1	1						1		
Pneumonia	5	1	4	3		2		3	2		1		1	1			1			1
Broncho-pneumonia																				
Asthma																				
Pleurisy																				
Other Respiratory Diseases																				
Gastritis	4	3	1	3	1		3		1	2	1								1	
Diarrhœal Diseases	63	34	29	60		3	54	4	5	48	11		1						3	
Appendicitis and Peritonitis	8	6	2	6	2		4	3	1			2	3	1	1	1				
Hernia and Intest. Obstruction	2	1	1	1	1		1		1	1							1			
Cirrhosis of Liver	2	1	1		1	1			2								1			1
Other Digestive Diseases	1		1	1					1							1				
Nephritis	6	3	3	1	2	3	2	2	2	1						1	2	2		
Other Urinary Diseases																				
Diseases of Female Generative System																				
Puerperal Septicæmia	1		1		1			1						1						
Other Diseases of Pregnancy	3		3	1	2			2	1					2	1					
Diseases of Skin and Cellular Tissue	1	1		1			1			1										
Locomotor System																				
Malformations	2	1	1	2			2			2										
Congenita Debility	16	9	7	16			16			16										
Senile Debility	2	1	1			2			2										1	1
Violence	19	15	4	5	11	3	5	5	9		2		2	1	7	2	3	1		1
Suicides	2	1	1		2		1		1						1			1		
Accidents	16	13	3	5	8	3	4	5	7		2		2	1	5	2	3			1
Homicides	1	1			1				1						1					
Other Causes and Ill-Defined																				

TABLE No. 11

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of October, 1899.

The Annual Death Rate for the month was 12.50 on an estimated population of 285,000.

During the month there were 55 deaths more than for the corresponding month of 1898.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.											
		Male.	Female.	Single.	Married.	Widowed.	Milwaukee.	U. S. other than Mil.	Foreign.	Under 1 year	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.
TOTAL—All Causes	302	164	138	172	91	39	156	42	104	73	39	16	17	22	29	25	19	30	22	9	1
General Diseases	89	42	47	49	31	9	41	16	32	5	15	6	8	16	8	9	9	7	6		
Typhoid Fever	10	6	4	4	6		2	5	3				1	5	1	1	1		1		
Measles	1	1		1			1				1										
Scarlet Fever	6	2	4	6			6				5	1									
Whooping Cough																					
Diphtheria and Membranous Croup	9	3	6	9			8	1		1	4	3	1								
Other Epidemic Diseases																					
Pulmonary Tuberculosis	24	7	17	14	7	3	9	7	8				4	10	4	4	1		1		
Other Tubercular Diseases	15	10	5	14	1		15			4	5	2	2		2						
Cancer	20	11	9		14	6		3	17						1	3	6	6	4		
Other General Diseases	4	2	2	1	3				4					1		1	1	1			
Local Diseases	193	108	85	113	51	29	109	16	68	67	23	9	6	3	14	14	10	22	15	9	1
Meningitis	11	7	4	9	2		7	2	2	4	3	1	1		1			1			
Apoplexy	10	3	7	1	6	3	2		8						1	3	2	2	1	1	
Other Dis's of Brain and Membranes	2	1	1	1		1	1		1	1										1	
Paralysis	1		1			1		1											1		
Convulsions	9	5	4	9			9			7	2										
Other Nervous Diseases	4	4		2		2	2		2	2								2			

(2) **Local Diseases** – Continued.																					
Organic Heart Diseases	22	12	10	5	13	4	5	5	14	1		1	1		2	3	3	7	2	2	
Other Dis's of Circulatory System	4	4		1	2	1			4									4			
Bronchitis	11	3	8	5	4	2	5		6	3	2					1		1	2	2	
Pneumonia	14	10	4	9	4	1	8	2	4	4	3	1	1		1	1	1	1	1		
Broncho-pneumonia	4	2	2	3		1	3		1	1	2							1			
Asthma	1		1			1			1										1		
Pleurisy																					
Other Respiratory Diseases	7	2	5	5	1	1	5		2	1	3				1	1		1			
Gastritis	4	4		4			4			1	3										
Diarrhœal Diseases	23	20	3	22		1	21		2	14	5	2	1							1	
Appendicitis and Peritonitis	10	5	5	5	4	1	4	2	4			3		1	3	1			1		
Hernia and Intest. Obstruction	2		2		2			1	1							1		1			
Cirrhosis of Liver	4	4			1	3			4								3	1			
Other Digestive Diseases	8	2	6	4	3	1	4	1	3	4						2			2		
Nephritis	6	4	2	3	2	1	3	1	2			1	1		1	1			2		
Other Urinary Diseases	1	1			1				1								1				
Diseases of Female Generative System	2		2	1	1			1	1					1	1						
Puerperal Septicæmia	2		2		2		2							1	1						
Other Diseases of Pregnancy	2		2		2			1	1						2						
Diseases of Skin and Cellular Tissue	3	1	2	3			3			3											
Locomotor System																					
Malformations	1		1	1			1			1											
Congenital Debility	20	12	8	20			20			20											
Senile Debility	5	2	3		1	4		1	4										2	2	1
Violence	20	14	6	10	9	1	6	10	4	1	1	1	3	3	7	2		1	1		
Suicides	5	3	2		4	1		3	2						3	1			1		
Accidents	15	11	4	10	5		6	7	2	1	1	1	3	3	4	1		1			
Homicides																					
Other Causes and Ill-Defined																					

TABLE No. 12

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of November, 1899.

The Annual Death Rate for the month was 12.28 on an estimated population of 285,000.

During the month there were 6 deaths more than for the corresponding month of 1898.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.											
		Male.	Female.	Single.	Married.	Widowed.	Milwaukee.	U. S. other than Mil.	Foreign.	Under 1 year	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.
TOTAL—All Causes	287	155	132	154	92	41	134	46	107	76	28	16	12	18	20	25	21	26	25	20	----
General Diseases	93	53	40	48	34	11	39	21	33	7	15	10	4	9	11	11	7	12	7	----	----
Typhoid Fever	4	4	----	1	3	----	3	----	1	----	--	----	1	1	1	----	----	1	----	----	----
Measles	5	2	3	5	----	----	5	----	----	3	2	----	----	----	----	----	----	----	----	----	----
Scarlet Fever	10	7	3	10	----	----	9	1	----	1	7	2	----	----	----	----	----	----	----	----	----
Whooping Cough	1	----	1	1	----	----	1	----	----	1	----	----	----	----	----	----	----	----	----	----	----
Diphtheria and Membranous Croup	16	12	4	15	----	1	11	5	----	1	6	7	1	----	1	----	----	----	----	----	----
Other Epidemic Diseases	1	----	1	----	----	1	----	1	----	----	----	----	----	----	----	----	----	----	1	----	----
Pulmonary Tuberculosis	23	14	9	10	11	2	7	5	11	----	----	1	1	4	7	6	2	1	1	----	----
Other Tubercular Diseases	5	2	3	3	2	----	3	1	1	1	----	----	--	2	1	1	----	----	----	----	----
Cancer	23	10	13	2	14	7	----	7	16	----	----	----	1	----	1	3	4	9	5	----	----
Other General Diseases	5	2	3	1	4	----	----	1	4	----	----	----	--	2	--	1	1	1	----	----	----
Local Diseases	179	89	90	101	50	28	91	22	66	69	12	6	7	7	5	10	12	13	18	20	----
Meningitis	5	4	1	5	----	----	3	1	1	2	1	2	----	----	----	----	----	----	----	----	----
Apoplexy	9	5	4	1	6	2	1	----	8	----	----	----	1	----	1	----	--	2	3	2	----
Other Dis's of Brain and Membranes	1	----	1	----	----	1	----	----	1	----	----	----	----	----	----	----	----	----	1	----	----
Paralysis	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Convulsions	13	5	8	13	----	----	13	----	----	11	2	----	----	----	----	----	----	----	----	----	----
Other Nervous Diseases	2	1	1	1	1	----	1	----	1	----	----	1	--	----	----	1	----	----	----	----	----

Local Diseases—Continued.																					
Organic Heart Diseases	14	7	7	4	6	4	4	3	7			1	3			3	2	1	3	1	
Other Dis's of Circulatory System	2	1	1		2				2								1		1		
Bronchitis	13	3	10	8	3	2	7		6	4	3							2	2	2	
Pneumonia	20	8	12	7	11	2	7	4	9	5	2			1	1	2	5	2	2		
Broncho-pneumonia	3	3		2		1	1		2		2									1	
Asthma	2	1	1		1	1		1	1								1			1	
Pleurisy																					
Other Respiratory Diseases	5	1	4	3	1	1	3		2		1	1	1		1					1	
Gastritis	3	1	2	3			3			3											
Diarrhœal Diseases	17	9	8	17			17			16	1										
Appendicitis and Peritonitis	7	4	3	3	2	2	2	2	3				2	1		1		3			
Hernia and Intest. Obstruction	1	1			1				1										1		
Cirrhosis of Liver	1	1			1				1								1				
Other Digestive Diseases	7	6	1	1	5	1		1	6					1		2		2		2	
Nephritis	9	7	2	3	4	2	1	3	5			1		1	1	1	1	1	1	2	
Other Urinary Diseases	5	5			2	3		2	3								1		3	1	
Diseases of Female Generative System	1		1	1				1						1							
Puerperal Septicæmia	1		1		1				1						1						
Other Diseases of Pregnancy	2		2	1	1			1	1					2							
Diseases of Skin and Cellular Tissue	5	2	3	4		1	4		1	4										1	
Locomotor System																					
Malformations	1		1	1			1			1											
Congenital Debility	23	12	11	23			23			23											
Senile Debility	7	2	5		2	5		3	4										1	6	
Violence	15	13	2	5	8	2	4	3	8		1		1	2	4	4	2	1			
Suicides	5	4	1	1	2	2	1	1	3					1	1	2		1			
Accidents	10	9	1	4	6		3	2	5		1		1	1	3	2	2				
Homicides																					
Other Causes and Ill-Defined																					

TABLE No. 13

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of December, 1899.

The Annual Death Rate for the month was 13.24 on an estimated population of 285,000.

During the month there were 10 deaths less than for the corresponding month of 1898.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.											
		Male.	Female.	Single.	Married.	Widowed.	Milwaukee.	U. S. other than Mil.	Foreign.	Under 1 year	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.
TOTAL—All Causes	320	172	148	155	117	48	145	37	138	70	37	18	14	24	25	24	25	33	32	17	1
General Diseases	96	49	47	53	36	7	48	19	29	7	20	11	8	13	10	7	5	9	5	1	---
Typhoid Fever	4	1	3	2	1	1	---	2	2	---	---	---	2	---	1	---	---	1	---	---	---
Measles	3	1	2	3	---	---	3	---	---	1	2	---	---	---	---	---	---	---	---	---	---
Scarlet Fever	7	5	2	6	1	---	7	---	---	---	2	4	---	1	---	---	---	---	---	---	---
Whooping Cough	3	---	3	3	---	---	3	---	---	3	---	---	---	---	---	---	---	---	---	---	---
Diphtheria and Membranous Croup	18	10	8	18	---	---	15	3	---	---	12	5	1	---	---	---	---	---	---	---	---
Other Epidemic Diseases	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Pulmonary Tuberculosis	29	16	13	11	17	1	13	5	11	---	1	1	2	11	7	2	3	1	1	---	---
Other Tubercular Diseases	9	3	6	6	3	---	5	3	1	2	3	---	2	1	1	---	---	---	---	---	---
Cancer	17	10	7	1	11	5	---	5	12	---	---	---	---	---	1	5	1	5	4	1	---
Other General Diseases	6	3	3	3	3	---	2	1	3	1	---	1	1	---		---	1	2			---
Local Diseases	206	108	98	101	66	39	94	15	97	62	17	7	6	10	8	14	18	22	25	16	1
Meningitis	14	9	5	12	2	---	13	1	---	9	1	1	1	1	1	---	---	---	---	---	---
Apoplexy	22	13	9	2	13	7	2	2	18	1	1	---	---	---	---	4	4	3	8	1	---
Other Dis's of Brain and Membranes	4	3	1	1	2	1	---	---	4	---	---	---	1	---	1	---	2	---	---	---	---
Paralysis	1	1	---	---	1	---	---	---	1	---	---	---	---	---	---	---	1	---	---	---	---
Convulsions	10	5	5	10	---	---	10	---	---	8	2	---	---	---	---	---	---	---	---	---	---
Other Nervous Diseases	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Local Diseases—Continued.																					
Organic Heart Diseases	19	10	9	2	10	7	1	3	15	----	1	----	----	----	2	2	3	4	3	4	----
Other Dis's of Circulatory System	4	3	1	----	3	1	----	----	4	----	----	----	----	----	----	----	2	1	1	----	----
Bronchitis	11	4	7	8	1	2	7	1	3	5	----	3	----	----	----	----	----	1	1	1	----
Pneumonia	29	16	13	13	12	4	14	2	13	3	4	2	2	4	1	4	3	4	----	2	----
Broncho-pneumonia	2	----	2	----	2	----	----	----	2	----	----	----	----	----	----	----	----	----	1	1	----
Asthma	3	1	2	----	1	2	----	----	3	----	----	----	----	----	----	1	----	2	----	----	----
Pleurisy	1	----	----	----	1	----	----	----	1	----	----	----	----	----	----	----	----	----	1	----	----
Other Respiratory Diseases	1	1	1	1	----	----	1	----	----	----	1	----	----	----	----	----	----	----	----	----	----
Gastritis	4	2	2	4	----	----	4	----	----	4	----	----	----	----	----	----	----	----	----	----	----
Diarrhœal Diseases	11	4	7	11	----	----	11	----	----	6	5	----	----	----	----	----	----	----	----	----	----
Appendicitis and Peritonitis	3	2	1	2	1	----	----	2	1	----	----	----	1	1	----	----	----	1	----	----	----
Hernia and Intest. Obstruction	3	1	2	----	2	1	----	----	3	----	----	----	----	----	----	----	----	2	1	----	----
Cirrhosis of Liver	1	1	----	----	----	1	----	----	1	----	----	----	----	----	----	----	1	----	----	----	----
Other Digestive Diseases	1	----	1	1	----	----	----	----	1	----	----	----	----	1	----	----	----	----	----	----	----
Nephritis	19	11	8	8	7	4	6	2	11	1	2	1	1	1	1	3	2	2	4	1	----
Other Urinary Diseases	2	1	1	----	1	1	----	1	1	----	----	----	----	----	1	----	----	----	1	----	----
Diseases of Female Generative System	1	----	1	----	1	----	----	----	1	----	----	----	----	1	----	----	----	----	----	----	----
Puerperal Septicæmia	1	----	1	----	1	----	----	----	1	----	----	----	----	1	----	----	----	----	----	----	----
Other Diseases of Pregnancy	1	----	1	----	1	----	----	----	1	----	----	----	----	----	1	----	----	----	----	----	----
Diseases of Skin and Cellular Tissue	4	1	3	3	1	----	3	----	1	3	----	----	----	----	----	----	----	1	----	----	----
Locomotor	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Malformations	1	1	----	1	----	----	1	----	----	1	----	----	----	----	----	----	----	----	----	----	----
Congenital Debility	21	12	9	21	----	----	21	----	----	21	----	----	----	----	----	----	----	----	----	----	----
Senile Debility	12	6	6	1	3	8	----	1	11	----	----	----	----	----	----	----	----	1	4	6	1
Violence	18	15	3	1	15	2	3	3	12	1	----	----	----	1	7	3	2	2	2	----	----
Suicides	6	6	----	----	6	----	2	----	4	----	----	----	----	----	2	2	1	----	1	----	----
Accidents	12	9	3	1	9	2	1	3	8	1	----	----	----	1	5	1	1	2	1	----	----
Homicides	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Other Causes and Ill Defined	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

TABLE No. 14

Showing, by wards, the Estimated Population, Total Deaths, Annual Death Rate, and the Number of Deaths from some of the more important causes, for the year 1899.

WARDS.	Estimated Population.	Total Deaths.	Annual Death Rate Per Thousand.	Deaths Under One Year.	Deaths One to Five Years.	CAUSES OF CAUSES.									
						Diphtheria & Membranous Croup.	Scarlet Fever.	Typhoid Fever.	Acute Intestinal Disorders		Tubercular Diseases	Pneumonia.	Bronchitis.	Diseases of the Nervous System.	Diseases of the Circulatory System.
									Under One Year	Over One Year					
First	10,870	89	8.19	12	6	1	----	1	2	4	8	11	1	15	15
Second	11,270	121	10.73	28	9	4	----	2	12	5	25	10	4	10	11
Third	5,460	62	11.36	16	7	1	----	----	9	4	10	3	5	8	4
Fourth	11,180	131	11.72	19	7	4	----	1	6	7	19	11	3	10	19
Fifth	11,000	133	12.09	28	15	4	----	2	7	7	19	10	8	12	13
Sixth	15,390	166	10.78	33	16	4	3	3	9	7	17	14	6	21	18
Seventh	7,530	49	6.51	9	1	1	----	----	3	1	4	3	2	7	6
Eighth	17,850	210	11.76	43	20	11	1	2	11	4	36	20	9	24	19
Ninth	19,360	223	11.52	61	18	9	----	----	28	11	34	12	7	26	25
Tenth	18,350	214	11.66	52	28	9	4	----	19	9	33	13	11	21	14
Eleventh	21,310	269	12.62	112	37	7	3	7	29	6	32	20	15	37	14
Twelfth	13,170	191	14.50	62	35	4	4	3	18	8	23	17	9	25	8
Thirteenth	17,490	233	13.32	78	23	8	3	5	29	6	29	22	12	16	11
Fourteenth	19,600	319	16.27	152	51	5	4	1	62	20	33	36	17	50	9
Fifteenth	12,600	129	10.24	23	11	5	1	1	8	6	16	8	2	14	15
Sixteenth	8,840	91	10.29	20	5	2	1	2	6	4	12	4	4	17	8
Seventeenth	10,150	151	14.87	61	17	2	4	4	25	6	8	13	5	17	8
Eighteenth	12,710	154	12.12	49	17	1	1	----	18	9	16	14	8	19	6
Nineteenth	15,370	196	12 78	52	33	13	----	5	14	9	23	10	9	26	10
Twentieth	14,860	210	14.13	65	32	10	3	2	23	13	23	19	7	31	8
Twenty-first	10,640	149	14.00	47	31	3	4	2	15	8	23	8	6	19	11
Hospitals and Institutions	--------	353	----	91	9	1	----	4	31	27	38	8	23	27	14
Total	285,000	3,843	13.48	1,113	428	109	36	47	384	181	481	286	173	452	266

TABLE No. 15

Showing, by months, the Number of Deaths occurring in the various Public and Private Institutions, Hospitals, Reformatories, etc., for the year 1899.

Hospitals and Institutions.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
House of Correction	1						1						2
House of Mercy					1								1
Infants' Home			1	1		1	2	4	1	1	1		12
Johnson Emergency Hospital	3	1	3	1	4	1	8	5	2	6	3	4	41
Little Sisters of the Poor	7	5	2	5	3	1	1	2	2	2	1	2	33
Milwaukee Children's Hospital		1						2					3
Milwaukee County Jail											1		1
Milwaukee Hospital	5	7	2	2	5	2	3	1	5	7	3	3	45
Milwaukee Pulmonary Sanitarium					1	1	3	1		1	1	2	10
Notre Dame Convent						1		1		1			3
Protestant Home for Aged	1				2					1	2		6
Protestant Orphan Asylum													
Sacred Heart Sanitarium											1		1
St. Joseph's Hospital	3		5	1	1	1	3	2	5	4	6	3	34
St. Mary's Hospital	2	4	8	4	3	4	2	2	1	4		1	35
St. Rose Orphan Asylum	1	1											2
St. Vincent Orphan Asylum	10	7	1	12	5	10	4	7	5	1	3	5	70
Trinity Hospital	3	1	1		2	1	4	10	3	3	3	4	35
Wisconsin General Hospital		2	1	2		4	1	1	2	1		1	15
Wisconsin Industrial School for Girls						1						1	2
City Isolation Hospital				1								1	2
Total	36	29	24	29	27	28	32	38	26	32	25	27	353

TABLE No. 16

Showing Nativity of those dying in the city during the year 1899.

UNITED STATES.		FOREIGN.	
Milwaukee	1960	Australia	1
Wisconsin, other than Milwaukee	203	Austria	10
Connecticut	4	Bavaria	6
Illinois	26	Bohemia	43
Indiana	9	Canada	27
Iowa	7	Denmark	3
Kansas	3	England	35
Kentucky	4	France	5
Maryland	6	Germany	887
Massachusetts	11	Holland	16
Michigan	19	Ireland	118
Minnesota	6	Italy	5
Missouri	4	Norway	26
New Hampshire	3	Poland	158
New Jersey	7	Prussia	5
New York	90	Russia	9
Ohio	18	Scotland	17
Pennsylvania	16	Sweden	5
Vermont	11	Switzerland	13
Other of U. S. not specified	43	Wales	4
		Total	3843

TABLE No. 17

Showing, by months, the Disposition in the various Cemeteries, and otherwise, of the bodies of those dying in the city, exclusive of still births.

CEMETERIES, ETC.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Union	119	89	91	87	74	58	87	104	74	71	75	78	1,007
Forest Home	75	57	51	47	50	51	43	48	32	47	46	51	598
Calvary	97	83	59	80	73	73	84	64	59	58	66	81	877
Polish Union	37	40	33	44	29	31	61	43	30	37	28	43	456
Pilgrims Rest	29	22	20	23	32	18	16	24	21	17	22	21	265
Wanderers Rest	11	5	9	13	7	8	10	17	9	9	6	6	110
Trinity	10	12	10	6	10	8	17	8	8	16	11	9	125
Greenwood	1	.....	4	1	1	1	.....	.....	.....	.....	3	1	12
Spring Hill	2	.....	.....	1	1	.....	.....	.....	2	1	1	1	9
Second Home	2	1	3	.....	1	2	.....	2	2	2	.....	2	17
County Poor Farm	6	8	1	2	2	2	3	10	6	4	4	3	51
Shipping Permits	43	22	38	22	29	10	25	17	19	38	25	22	310
For Anatomical Purposes	.....	1	.....	.....	.....	.....	.....	1	.....	2	.....	2	6
Total	432	340	319	326	309	262	346	338	262	302	287	320	3,843

TABLE No. 18

Showing for the last six years, 1894 to 1899, the total annual number of Births and Deaths, Birth and Death rates, and excess of Births over Deaths.

Years.	Population.	Births.	Deaths.	Excess of Births over Deaths,	Rate per 1000 Population.		Excess of Birth Rate over Death Rate.
					Births.	Deaths.	
1894.....	241,000	7,624	4,253	3,371	31.63	17.64	13.99
1895.....	250,000	7,813	3,885	3,928	31.25	15.54	15.71
1896	260,000	7,855	3,904	3,951	30.21	15.00	15.21
1897.....	275,000	7,642	3,606	4,036	27.79	13.11	14.68
1898.....	280,000	7,796	3,338	4,458	28.09	11.92	16.17
1899.....	285,000	7,544	3,843	3,701	26.47	13.48	12 99

BIRTHS.

TABLE No. 19

Showing, by months, the Total Number Reported, their Color, Sex, and by Whom Reported.

Months.	Color.		Sex.		By Whom Reported.		Total.
	White.	Black.	Male.	Female.	Physician.	Midwife.	
January	578	1	273	306	158	421	579
February	525	.....	272	253	138	387	525
March	629	1	319	311	173	457	630
April	547	.....	284	263	134	413	547
May	593	.....	319	274	167	422	593
June	543	2	274	269	165	378	543
July	642	.....	330	312	195	447	642
August	703	.....	361	342	173	530	703
September	664	1	374	291	238	427	665
October	920	1	491	430	317	604	921
November	551	.....	287	264	197	357	551
December	644	1	313	332	181	464	645
Total	7,539	7	3,897	3,647	2,237	5,307	7,544

TABLE No. 20

Showing, by months, the Nativity of Parents of Children whose Births were reported during the year 1899.

NATIVITY OF PARENTS.	FATHER.													MOTHER.												
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
Milwaukee	87	90	97	86	84	93	116	89	112	160	81	84	1,179	121	106	125	95	98	112	124	126	133	158	109	116	1,422
Wisconsin other than Milwaukee	60	43	51	49	61	40	70	60	69	99	58	49	709	81	60	65	78	61	68	88	64	93	115	72	67	912
Other parts of U. S.	61	58	56	52	57	69	61	71	86	76	65	57	769	62	54	73	68	71	51	72	87	93	75	70	68	844
Germany	228	241	295	240	279	234	268	327	263	403	230	286	3,294	197	220	258	206	254	209	248	297	235	401	209	255	2,989
Other European Countries	141	89	128	115	110	106	125	150	133	180	112	163	1,552	128	85	109	98	109	102	110	126	111	163	90	133	1,364
Unknown, or not stated	2	4	3	5	2	1	2	6	2	3	5	6	41	----	----	----	2	----	1	----	3	----	----	1	6	13
Total	579	525	630	547	593	543	642	703	665	921	551	645	7,544	579	525	630	547	593	543	642	703	665	912	551	645	7,544

TABLE No. 21

Showing, by months, the Number of Births reported from each Ward during the year 1899.

Wards.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
First	13	3	4	10	7	14	9	9	13	14	9	14	119
Second	14	16	17	16	20	17	13	20	19	22	12	21	207
Third	9	5	10	13	7	16	11	9	3	16	20	11	130
Fourth	10	4	11	12	15	6	6	4	10	15	15	13	121
Fifth	11	8	13	13	15	10	16	10	12	13	8	17	146
Sixth	41	21	18	24	26	17	32	26	24	50	25	27	331
Seventh	.....	2	3	3	2	5	5	3	1	7	5	1	37
Eighth	20	18	27	21	27	13	35	28	38	40	22	25	315
Ninth	38	29	37	41	50	37	46	59	50	52	38	37	513
Tenth	30	22	35	36	28	23	37	31	35	54	24	26	381
Eleventh	57	45	55	49	63	59	60	68	71	81	61	69	738
Twelfth	34	21	38	29	29	17	25	39	23	52	21	32	360
Thirteenth	34	44	40	34	36	27	42	50	40	72	27	44	490
Fourteenth	67	63	90	50	58	68	63	97	65	107	51	86	865
Fifteenth	15	9	18	17	10	15	22	20	23	22	27	13	211
Sixteenth	5	9	5	7	3	6	4	9	11	10	16	8	93
Seventeenth	15	20	20	17	27	28	33	26	26	38	20	27	297
Eighteenth	25	29	22	23	28	19	30	38	30	38	21	29	332
Nineteenth	41	48	49	36	42	42	43	50	38	60	47	50	546
Twentieth	24	27	37	32	27	44	37	50	50	59	31	36	454
Twenty-first	25	32	31	27	37	22	41	24	15	54	31	28	367
Wards not specified	51	50	50	37	36	38	32	33	68	45	20	31	491
Total	579	525	630	547	593	543	642	703	665	921	551	645	7,544

TABLE No. 22

Showing, by months, the Total Number of Births Reported, the Birth Rate per 1,000, the Number of Males and Females, together with the Percentage of Total Birth of each Sex.

Months.	Number of Births Reported.	Birth Rate per 1,000.	Male.	Female.	Percentage of Males to Total.	Percentage of Females to Total.
January	579	23.97	273	306	47.1	52.9
February	525	23.94	272	253	51.8	48.2
March	630	26.08	319	311	50.6	49.4
April	547	23.41	284	263	51.9	48.1
May	593	24.55	319	274	53.8	46 2
June	543	23.24	274	269	50.5	49.5
July	642	23.07	330	312	51 4	48.6
August	703	29.10	361	342	51.3	48.7
September	665	28.47	374	291	56.2	43.8
October	921	38.13	491	430	53.3	46.7
November	551	23.58	287	264	52.1	47.9
December	645	26.70	313	332	48.5	51.5
Total	7,544	26.47	3,897	3,647	51.6	48.4

MARRIAGES.

TABLE No. 23

Showing, by months, the Total Number of Marriages Reported, the Color of the Contracting Parties, and the Ceremony by which the marriage was performed.

Months.	Number of Marriages Reported.	Color.				Ceremony.					
		White.		Black.		Religions.			Civil.		
		Husband.	Wife.	Husband.	Wife.	Protestant.	Catholic.	Jewish.	Justice of Peace.	Judge.	Others.
January	232	229	231	3	1	184	11	6	18	4	9
February	231	230	230	1	1	95	66	3	66	.....	1
March	183	182	183	1	.....	109	12	2	57	3	.....
April	214	213	213	1	1	120	28	1	62	1	2
May	342	340	341	2	1	189	60	5	85	2	1
June	251	249	250	2	1	157	53	4	35	.....	2
July	274	274	274	.....	.....	111	94	3	60	5	1
August	170	167	167	3	3	69	45	6	49	.....	1
September	207	207	207	.....	.....	122	45	1	37	.....	2
October	309	307	307	2	2	133	127	3	45	1	.....
November	198	197	197	1	1	106	64	6	19	3	.....
December	199	199	199	.....	.....	100	45	3	47	4	.....
Total	2,810	2,794	2,799	16	11	1,495	650	43	580	23	19

TABLE No. 24

Showing, by months, the Total Number of Marriages reported, and the Place of Residence of Husband.

MONTHS.	Total Number Reported for Month.	RESIDENCE OF HUSBAND.					
		Milwaukee.	Wisconsin other than Milwaukee.	Chicago.	Illinois other than Chicago.	Other Places	Unknown or Not Stated.
January	232	104	18	71	15	24	.....
February	231	128	16	60	12	15	.....
March	183	87	16	56	9	15	.....
April	214	139	21	33	9	12	.....
May	342	237	42	50	6	7	.....
June	251	208	24	12	2	4	1
July	274	204	24	24	5	17	.....
August	170	126	11	17	6	10	.....
September	207	170	7	16	4	10	.....
October	309	270	22	7	4	6	.....
November	198	171	11	6	3	6	1
December	199	173	11	6	1	8	.....
Total	2 810	2,017	223	358	76	134	2

TABLE No. 25

Showing, by months, the Total Number of Marriages reported with the Place of Birth of the Contracting Parties.

Months.	Number of Marriages Reported.	Birthplace of Parties.									
		Milwaukee		Wisconsin other than Milwaukee		Others of U. S.		Foreign.		Unknown or not Stated.	
		Husband.	Wife.	Husband.	Wife.	Husband.	Wife.	Husband.	Wife.	Husband	Wife.
January	232	28	44	19	37	99	85	86	65	.....	1
February	231	28	47	37	38	83	73	83	73	.....	.....
March	183	34	28	29	22	59	76	61	57	.....	.....
April	214	30	56	38	35	59	47	86	75	1	1
May	342	81	112	37	60	72	69	152	101	.....	.....
June	251	71	106	43	43	48	27	89	75	.....	.....
July	274	62	101	49	47	53	31	110	95	.....	.....
August	170	39	52	28	29	37	29	65	60	1	.....
September	207	57	62	28	30	36	32	86	81	.....	2
October	309	92	121	52	43	34	24	128	120	3	1
November	198	64	62	18	29	36	28	78	78	2	1
December	199	45	75	33	36	29	23	92	65	.....	.....
Total	2,810	631	866	411	449	645	544	1,116	945	7	6

REPORT

OF

ANALYST.

REPORT OF ANALYST.

Dr. F. M. Schulz, Commissioner of Health:

Dear Sir—I have the honor to submit the following report, showing the work done in the Chemical and Bacteriological Laboratories during the year 1899.

I wish, especially, to commend the valuable and conscientious work done by our milk inspectors, J. F. Cunningham and Harry Keihl.

As may be seen by the tables, the quality of the milk supplied to the city is constantly improving in its fat content. We also believe that a much cleaner milk is being delivered than heretofore, due to the plan of pouring filthy milk into the sewer when such is found.

Respectfully submitted,

W. C. BENNETT, M. D.,

Analyst.

The following tables will explain themselves:

TABLE No. 1

Number of milk dealers licensed during the year	1,086
Total samples of milk analyzed Jan. 1, '99—Jan. 1, 1900	6,318
Average fat of 6,318 samples	3.76%
Number of samples below 3.0% butter fat	248
Per cent. below 3.0%	3.92
Average fat of 248 samples	2 64%
Average fat of 6,070 samples	3.81%
Total samples brought in by inspectors	5,753
Average fat of 5,753 samples	3.70%
Number samples below 3.0%	203
Per cent. below 3.0%	3.53%
Number samples brought in by private individuals	656
Average fat of 656 samples	3.75%
Number of samples below 3.0%	45
Per cent. below 3.0%	6.86%
Number of samples from depot	2,007
Average fat of 2,007 samples	3.8%
Number of samples below 3.0%	49
Per cent. below 3.0%	2.44%
Number samples cream analyzed	276
Average fat of 276 samples	20.95%
Number arrests made	106
Amount of fines imposed	$830.00
Skimmed milk and buttermilk analyzed	14
Gallons of milk confiscated	100

TABLE No. 2

Month.	Samples Analyzed	Average Fat.	No Below 3.0 per cent.	Quarts.	Cream Analyzed.	Average Fat.	Arrests.	Fines.
January	480	3.80	8	7,684	1	18.00	1	.....
February	394	3.71	16	7,770	19	23.55	3	$ 25.00
March	765	3.66	36	14,347	32	20.95	20	125.00
April	677	3.72	24	15,802	33	22.26	11	150.00
May	500	3.73	31	8,884	30	21.18	21	150.00
June	444	3.74	27	8,643	13	19.00	12	75.00
July	530	3.67	29	12,489	19	20.10	6	50.00
August	489	3.68	45	10,144	27	21.35	21	180.00
September	359	3.73	11	7,171	8	19.25	5	00.00
October	521	3.91	6	12,618	29	19.80	2	25.00
November	610	3.95	10	15,279	40	21.74	2	50.00
December	549	3.85	5	12,191	25	19.06	2	00.00
Totals	6,318	3.76	248	132,946	276	20.95	106	$830.00

TABLE No. 3

	1896.	1897.	1898.	1899.
Number of analyses of milk made	2,134	4,675	6,919	6,318
Number samples below 3.0%	191	254	353	248
Per cent. below 3.0%	8.95	5.43	5.12	3.92
Average fat of milk	3.62	3 74	3.747	3.76
Number of analyses of cream made	37	54	102	276
Average fat of cream	19.20	19.40	17.80	20.95
Number arrests made	7	138	148	106
Amount of fines imposed	$116.00	$810.00	$455.00	$830.00

TABLE SHOWING QUALITY OF MILK FROM VARIOUS SOURCES.

Source.	No. Samples.				Average Fat.				Below 3.0 Per Cent.				Per Cent. Below 3.0 Per Cent.			
	1896	1897	1898	1899	1896	1897	1898	1899	1896	1897	1898	1899	1896	1897	1898	1898
City Dealers	1,598	4,018	5,475	3,655	3.62	3.73	3.75	3.74	161	215	285	154	10.14	5 35	5.00	4.21
Depots	*158	72	583	2,007	*3.61	4.18	3.80	3.80	*17	0	21	49	*10.76	0	2.46	2.44
Private Individuals	351	585	591	656	3.80	3.80	3.63	3.75	25	39	53	45	7.12	6.66	8.97	6.86
Total	2,107	4,675	6,919	6.318	3.64	3.74	3.74	3.76	203	254	353	248	9.63	5.43	5.12	3.92

*Source unknown.

The analyses made of Water from the several places indicated show the following result in 100,000 parts:

LAKE WATER—1899.

PLACE.	Date.	Physical Appearance.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd Matter.	Chlorine.	Total Solids.	Loss on Ignition.
Laboratory tap	Jan. 5.	Clear	None	None	None	0.006	0.12	0.35	12.0	4.0
Laboratory tap	Jan. 17.	"	"	"	0.001	0.011	0.14	0.32	18.0	5.0
Laboratory tap	Feb. 10	"	"	"	0.001	0.010	0.10	0.34	8.0	3.0
Laboratory tap	May 4.	"	"	"	0.001	0.012	0.15	0.33	12.0	4.0
Laboratory tap	May 12.	"	"	"	0.001	0.012	0.12	0.34	10.0	4.0
Laboratory tap	May 29.	"	"	"	0.000	0.011	0.13	0.35	14.0	4.0
Laboratory tap	June 20.	"	"	"	0.002	0.012	0.13	0.32	14.0	4.0
Laboratory tap	July 10.	"	"	"	0.001	0.008	0.15	0.33	20.0	4.0
12th and North Ave	July 11.	"	"	"	0.001	0.008	0.15	0.34	10.0	4.0
251 3d St	July 19.	"	"	"	0.001	0.008	0.13	0.34	22.0	6.0
271 18th St	July 22.	"	"	"	0.001	0.008	0.13	0.34	10.0	3.0
Laboratory tap	Aug. 18.	"	"	"	0.000	0.010	0.12	0.35	12.0	4.0
Laboratory tap	Sept. 6.	Sl, Turbid	"	Trace	0.002	0.011	0.16	0.35	20.0	8.0
Laboratory tap	Oct. 3.	"	"	"	0.000	0.010	0.16	0.36	20.0	6.0
Laboratory tap	Oct. 16.	"	Heavy traces	"	0.002	0.009	0.17	.....	20.0	8.0
Laboratory tap	Oct. 30.	"	Small am't	"	0.001	0.007	0.14	0.37	14.0	4.0
Laboratory tap	Nov. 24.	Clear	Heavy traces	None	0.002	0.011	0.11	Trace	10.0	5.0
Laboratory tap	Dec. 18.	"	None	"	0.003	0.012	0.10	"	10.0	4.0

The analysis made of Water from the several places indicated show the following result in 100,000 parts:

WELL WATER—January, 1899.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.	For Use.
1411 Center St	5	Large am't	Large am't	0.100	0.040	0.94	14.2	150.0	58.0	Unfit
806-808 Sixth Ave.	9	"	"	0.020	0.020	0.25	16.3	188.0	72.0	"
800 Sixth Ave	9	None	None	0.004	0.010	0.28	17.6	140.0	44.0	Suspicious
879 Maple St	14	Large am't	Large am't	0.002	0.016	0.11	19.7	208.0	90.0	Unfit
660 Twenty-fifth St	21	None	None	0.020	0.208	0.29	12.9	192.0	52.0	"
Homewood	23	Large am't	None	0.002	0.006	0.15	0.4	50.0	20.0	Usable

The analysis made of Water from the several places indicated show the following result in 100,000 parts:

WELL WATER—February, 1899.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.	For Use.
2429 Pond du Lac Ave	7	Large am't	Large am't	0.003	0.026	0.26	18.7	156.0	42.0	Unfit
1268 Booth St	21	"	"	0.014	.....	0.36	30.2	232.0	118.0	"
568 Eighth Ave	22	"	None	0.007	0.054	0.47	27.5	142.0	50.0	"

The analysis made of Water from the several places indicated show the following result in 100,000 parts:

WELL WATER—March, 1899.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.	For Use.
668 American Ave.	14	Large am't	Heavy traces	0.006	0.040	0.29	33.3	242.0	118.0	Unfit
1109 Chestnut	14	"	Large am't	0.022	0.048	0.55	14.0	180.0	86.0	"
835 Eighth Ave	14	"	"	0.005	0.034	.....	13.0	136.0	56.0	"
630 Scott St	22	"	"	.....	.....	0.44	8.0	.....	.....	"

The analysis made of Water from the several places indicated show the following result in 100,000 parts:

WELL WATER—April, 1899.

PLACE.	Date.	Nitrates.	Nitrites,	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.	For Use.
949 Fifth Ave	11	Large am't	Large am't	.....	.....	0.25	11.0	96.0	50.0	Unfit
926 Fifth Ave	11	"	None	.....	.....	0.18	14.0	116.0	58.0	"
761 Fifteenth Ave.	13	None	Trace	.....	.....	0.12	1.6	30.0	12.0	Usable
1337 Walnut St	13	Large am't	None	0.001	0.020	0.27	8.4	80.0	26.0	Unfit
1457 Louis Ave	18	"	Trace	0.004	0.010	0.15	12.0	100.0	40.0	"

The analysis made of Water from the several places indicated show the following result in 100,000 parts:

WELL WATER—May, 1899.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd Matter.	Chlorine.	Total Solids.	Loss on Ignition.	For Use.
997 Fourth St	4	Large am't	Large am't	0.003	0.014	0.27	16.2	180.0	80.0	Unfit
264 Sixteenth St	5	"	None	0.020	0.054	0.63	18.4	230.0	84.0	"
1123 Twenty-second St	8	"	Large am't	0.001	0.046	0.70	46.3	240.0	90.0	"
630 Scott St	8	"	"	0.001	0.008	0.19	7.7	124.0	60.0	"
1072 Sixth St	10	"	"	0.003	0.049	0.34	19.0	234.0	116.0	"
715 Lee St	11	"	"	0.090	0.102	1.60	20.4	130.0	42.0	"
600 Maple St	11	"	"	0.072	0.020	0.46	70.0	220.0	90.0	"
1144 Seventh St	12	"	"	0.016	0.030	0.26	15.7	166.0	80.0	"
Concordia and Bartlett	12	"	None	0.009	0.028	0.19	11 0	100.0	44.0	"
1810 Galena	15	"	Large am't	0.020	0.032	0.24	26.5	154.0	68.0	"
—Oneida	29	"	"	0.002	0.014	0.12	3.0	60.0	30.0	Suspicious

The analysis made of Water from the several places indicated show the following result in 100,000 parts:

WELL WATER—June, 1899.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.	For Use.
705 National Ave	1	Large am't	Trace	0.003	0.023	0.21	9.5	122.0	42.0	Unfit
630 Scott St	1	"	"	0.001	0.012	0.13	7.6	120.0	66.0	Suspicious
1275 Thirteenth St	1	"	Large am't	0.015	0.015	0.20	3.6	86.0	38.0	Unfit
1039 Third St	20	Small am't	Heavy traces	0.003	0.010	0.17	3.0	64.0	14.0	Suspicious
1204 North Pierce St	20	None	V'y h'y traces	0.018	0.014	0.19	1.7	70.0	12.0	Unfit
923 Twentieth St	20	Small am't	"	0.012	0.015	0.19	11.5	100.0	34.0	"
886 Robinson St	24	Large am't	Large am't	0.003	0.057	0.77	16.0	138.0	58.0	"
878 Robinson St	24	"	"	0.006	0.028	0.62	32.0	208.0	102.0	"
1529 Kinnickinnic Ave	24	Heavy traces	None	0.002	0.007	0.11	1.2	36.0	18.0	Usable
617 Eleventh St	28	Large am't	"	0.038	.....	0.23	9.2	170.0	66.0	Unfit

The analysis made of Water from the several places indicated show the following result in 100,000 parts:

WELL WATER—July, 1899.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia	Oxyd. Matter.	Chlorine.	Total Solids	Loss on Ignition.	For Use.
574 Fifth St	1	Large am't	None	0.002	0.005	0.16	7.0	154.0	56.0	Suspicious
650 Twenty-second Ave	5	None	"	0.008	0.010	0.30	1.0	46.0	22.0	"
682 Third St	5	Large am't	Large am't	Trace	0.010	0.23	15.5	134.0	54.0	Unfit
1063 Eleventh St	7	"	"	Trace	0.010	0.20	5.7	122.0	52.0	"
82 Reservoir Ave	10	"	"	0.001	0.009	0.16	12.6	120.0	60.0	"
1024 Holton St	10	None	None	0.001	0.006	0.17	2.0	50.0	14.0	Usable
Clement Ave	12	"	"	0.002	0.004	0.07	2.0	64.0	30.0	"
87 Nock St	12	Small am't	Large am't	0.012	0.006	0.08	1.0	40.0	8.0	Suspicious
1021 Nineteenth St.	13	"	Small am't	0.003	0.010	0.19	3.0	76.0	32.0	"
910 Center St	17	Large am't	Large am't	0.005	0.017	0.40	6.0	66.0	16.0	Unfit
Fortieth St., Wauwatosa	19	"	"	0,082	0.023	0.37	7.5	114.0	28.0	"
Fortieth St., Wauwatosa	19	"	"	0.002	0.015	0.30	2.3	58.0	8.0	Suspicious
20 Wright St	20	Small am't	None	0.001	.....	0.15	12.0	120.0	48.0	"
987 Greenfield Ave.	20	None	"	0.001	0.015	0.19	2.7	130.0	34.0	"
626 Third St	26	Large am't	Trace	0.001	0.014	0.18	9.0	110.0	30.0	Unfit
877 Kinnickninic Ave	28	None	None	None	0.006	0.10	1.4	30.0	20.0	Usable

The analysis made of Water from the several places indicated show the following result in 100,000 parts:

WELL WATER—August, 1899.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd Matter.	Chlorine.	Total Solids.	Loss on Ignition.	For Use.
611 Walnut St	2	Large am't	Large am't	0.001	0.023	0.38	14.0	214.0	128.0	Unfit
754-756 Sixth Ave.	7	"	"	0.003	0.015	0.45	40.0	300.0	140.0	"
1063 Eleventh St.	8	"	"	None	0.007	0.14	4.5	108.0	42.0	"
814 Center St	16	"	"	0.084	0.014	0.30	20.0	206.0	100.0	"
611 Walnut St	16	"	None	None	0.036	0.29	14 5	160.0	76.0	"
776 First Ave	18	"	Heavy traces	None	0.015	0.24	28.5	186.0	84.0	"
612 Dover St	18	"	Large am't	0.006	0.012	0.21	5.0	76.0	40.0	"
810 Hadley St	29	"	"	0.001	0.011	0.25	13.0	136.0	66.0	"
814 Center St	29	"	"	None	0.013	0.15	15.0	138.0	66.0	"
422 Twentieth St.	30	"	"	0.112	0.034	0.40	26.6	268.0	160.0	"
156 Archer Ave	30	"	None	Trace	0.014	0.21	8.5	92.0	32.0	"
1057 Garden St	30	Small am't	Heavy traces	0.003	0.014	0.14	2.3	56.0	24.0	Suspicious
715 Lee St	31	Large am't	Large am't	0.088	0.033	0.48	33.5	328.0	168.0	Unfit
2520 Hadley St	31	Small am't	"	0.024	0.008	0.19	2.9	60.0	26.0	"

The analysis made of Water from the several places indicated show the following result in 100,000 parts:

WELL WATER—September, 1899.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.	For Use.
2007 Vliet St	6	Large am't	Large am't	0.027	0.056	1.40	24.5	140.0	76.0	Unfit
1316 Eleventh St	6	"	"	None	0.022	0.34	22.0	270.0	156.0	"
313 Eleventh St	6	"	Heavy traces	0.003	0.010	0.14	1.5	64.0	28.0	Usable
851 Tenth Ave	6	None	None	0.002	0.006	0.16	1.6	78.0	32.0	Suspicious
428 Second Ave	7	Large am't	Trace	None	0.008	0.15	7.0	74.0	24.0	"
665 American Ave	11	"	Large am't	0.001	0.016	0.20	11.8	130.0	52.0	Unfit
736-738 Fifth Ave	11	"	"	0.004	0.013	0.16	16.0	170.0	82.0	"
26 Clark St	19	"	"	--------	--------	0.27	14.5	--------	--------	"
1007 Eighth St	21	"	"	0.005	0.015	0.35	24.0	216.0	90.0	"
Pt. Washington Road	22	Small am't	Small am't	0.004	0.005	0.13	3.7	56.0	28.0	Suspicious
616 State St	25	"	None	0.086	0.016	0.40	7.0	90.0	38.0	Unfit

The analysis made of Water from the several places indicated show the following result in 100,000 parts:

WELL WATER—October, 1899.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.	For Use.
737 Fifth Ave	3	Trace	Trace	0.000	0.006	0.25	1.0	36.0	10.0	Usable
688 Tenth Ave	3	Large am't	Large am't	0.005	0.016	0.27	29.0	170.0	68.0	Unfit
638 Mabbett Ave	6	Small am't	None	0.002	0.008	0.14	1.0	44.0	18.0	Usable
1069 Grove St	6	Large am't	Large am't	0.001	0.016	0.22	34.0	300.0	160.0	Unfit
Brick Yard—Park St	7	None	None	0.008	0.006	0.13	0.4	15.0	7.0	Usable
Union Cemetery	9	Trace	Trace	0.004	0.006	0.34	0.3	46.0	14.0	Unfit
Teutonia and Hopkins	11	Small am't	None	0.005	.....	0.10	4.3	52.0	22.0	Usab
1612 Chestnut St	14	Large am't	"	0.002	0.022	0.40	5.8	142.0	52.0	Unfit
671 Superior St	18	Trace	"	0.002	0.004	0.11	0.4	50.0	20.0	Usable
Lincoln Ave	18	"	Trace	0.030	0.006	0.13	3.8	86.0	30.0	Suspicious
57 Commerce St	19	Large am't	None	0.002	0.007	0.25	3.8	86.0	32.0	Usable
Union Cemetery	26	Small am't	Heavy traces	0.002	0.002	0.15	0.2	36.0	20.0	Unfit
Chicago Road	26	Trace	Large am't	0.004	0.017	0.22	3.0	80.0	24.0	"
312 Mineral St	26	Large am't	None	0.009	0.026	0.60	8.5	92.0	44.0	"
336 Seventeenth Ave	28	Small am't	"	0.002	0.004	0.14	0.3	46.0	14.0	Usable
273 Belleview Pl	31	Trace	Trace	0.003	0.008	0.12	3.3	44.0	16.0	Suspicious
2509 Cherry St	31	Large am't	None	0.001	0.043	0.63	31.0	184.0	66.0	Unfit

The analysis made of Water from the several places indicated show the following result in 100,000 parts:

WELL WATER—November, 1899.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids	Loss on Ignition.	For Use.
288 Greenfield Ave.	2	Large am't	Small am't	0.000	0.013	0.17	9.4	144.0	64.0	Unfit
1519 Chambers St.	3	"	None	0.002	0.025	0.35	10.0	168.0	84.0	"
1913 Lloyd St	7	Small am't	"	Enormous Amount.	0.028	0.31	16.0	194.0	64.0	"
2400 Center St	20	Large am't	Large am't	0.002	0.012	0.19	7.5	90.0	46.0	"
128 Prospect Ave	24	Small am't	None	0.012	0.017	0.18	1.0	118.0	40.0	"
744 First St	27	Large am't	"	0.006	0.008	0.15	6.2	70.0	30.0	Suspicious

The analysis made of Water from the several places indicated show the following result in 100,000 parts:

WELL WATER—December, 1899.

PLACE.	Date.	Nitrates.	Nitrites.	Free Ammonia.	Albuminoid Ammonia.	Oxyd. Matter.	Chlorine.	Total Solids.	Loss on Ignition.	For Use.
1517 Center St	6	Large am't	Large am't	0.026	0.046	1.50	22.6	160.0	80.0	Unfit
Nineteenth and Vine Sts	6	"	"	0.003	0.008	0.15	3.0	70.0	34.0	Suspicious
797 Eighth Ave	7	"	"	0.002	0.035	0.19	12.0	100.0	52.0	Unfit
2007 Vliet St	8	"	None	0.012	0.012	0.32	32.5	158.0	64.0	"
1106 Fifth Ave	11	None	"	0.004	0.017	0.17	5.5	74.0	24.0	Suspicious
1194 Second St	13	"	Trace	0.002	0.014	0.35	3.0	80.0	32.0	"
1034 Oakland Ave.	13	"	None	0.007	0.009	0.16	1.0	48.0	14.0	"
1008 Twenty-fourth St	14	Large am't	Small am't	0.090	0.013	0.15	8.0	120.0	64.0	"
402 Fowler St	19	None	None	0.006	0.004	0.06	0.8	34.0	18.0	Usable
402 Fowler St	19	"	Trace	0.007	0.008	0.18	1.0	46.0	16.0	Suspicious
629 Twentieth Ave.	22	Large am't	None	0.004	0.008	0.10	8.0	88.0	24.0	"
700 Fifth Ave	22	"	"	0.002	0.020	0.26	32.5	172.0	78.0	Unfit
428 Reed St	23	"	"	0.001	0.010	0.42	18.0	136.0	40.0	"
669 Scott St	23	"	"	0.010	0.015	0.38	23.0	174.0	64.0	"
Third St. and Fowler	29	None	"	0.045	0.005	0.10	0.5	40.0	16.0	Usable
929 Twelfth Ave	30	"	"	0.001	0.016	0.15	2.0	92.0	36.0	Suspicious

CHEMICAL ANALYSIS.

Milk	6,318
Cream	276
Lake water	18
Well water	120
Spring water	4
Vinegar	1
Butter	10
Human milk	4
Stomach contents	6
Urine	13
Miscellaneous	29
	6,799

BACTERIOLOGICAL ANALYSIS.

Diphtheria	162
Sputum	47
Typhoid (serum)	31
Milk	2
Miscellaneous	27
	269

Respectfully submitted,

W. C. Bennett, M. D.,
Analyst.

REPORT

OF

Chief Sanitary Inspector.

REPORT OF CHIEF SANITARY INSPECTOR.

F. M. Schulz, M. D., Commissioner of Health:

SIR—I herewith respectfully submit for your annual report the following statement of the work done by the Sanitary Inspectors for the year ending April 17, 1900.

This report, with the accompanying tables, gives the various kinds of orders issued by the department and the abatement of nuisances found.

The house to house inspections have been continued during the year.

The inspectors have made 19,826 complaint reports, 195 stable reports, 11 ice reports, 14 smoke reports, 74 smoke tests, and 14,640 inspections.

There have been 1,487 citizens' complaints investigated. Of these 912 were verified, either wholly or in part; of the balance 575 were found groundless, or the nuisance no longer existing.

The cutting and storing of ice within the city limits has been carefully looked after. This ice, harvested, amounts to 108,120 tons, almost all of which was cut above the dam in the Milwaukee river. All ice for domestic use is supposed to be brought from the inland lakes, and is generally brought in by rail as wanted for delivery.

ORDERS PERTAINING TO BAKERIES.

Clean bake shop	13
Clean floor	10
Clean pans, troughs or rising cloths	19
Clean rising boards or tables	23
Clean sleeping room	1
Clean store room	1
Clean wagon box	28
Cease using printed paper	2
Enclose or remove water closet	4
Plaster bake shop	1
Provide catch basin	1
Provide cement or hardwood floor	43
Provide rack for flour	1
Provide sufficient light for the shop	2
Provide towels for upper floors	1
Remove water closet and urinal	1
Renew pit floor	1
Repair stairs	2
Repair walls of bake shop	1
Repair water closet	2
Use clean paper in pans	1
Whitewash baks shop	37

CONFECTIONARIES.

Clean confectionary	6
Clean urinals	1

BUTCHER SHOPS.

Clean butcher shop	1
Clean butcher's offal from yard	2
Provide ice box	1

ORDERS PERTAINING TO BARNS.

Clean barn	10
Clean cows	18
Clean cow yard	1
Comply with Section 3 of Milk Ordinance	2
Connect cow barn to sewer	2
Connect cow barn to tank	4
Extend ventilation shaft	2
Procure license	5
Provide new floor for stable	1
Ventilate cow and livery barn	2
Whitewash barn	22

ORDERS PERTAINING TO PLUMBING, ETC.

A.

Clean sewer	36
Connect cistern	2
Connect exhaust	1
Connect ice box	4
Connect roof conductors	19
Connect sink	12
Provide sewer	5
Repair and relay sewer	31
Seal sewer	19
Trap sewer	2
Trap roof conductors	1

B.

Clean sink and waste pipe	5
Provide Sink	7
Repair sink	6
Repair sink waste pipe	14
Repair sing trap	3
Trap sink	35
Ventilate sink	1

C.

Clean slop hopper	11
Provide slop hopper	6
Remove slop hopper	10
Repair slop hopper	7

D.

Clean water closet	34
Connect water closet	1
Disconnect water closet	2
Disinfect water closet	1
Enclose water closet	1
Extend vent pipe	1
Provide water closet	77
Provide water for water closet	22
Remove pan closet	11
Renew water closet	7
Repair water closet	36
Repair soil pipe	2
Seal water closet	1
Trap water closet	1

E.

Clean catch basin	9
Cover catch basin	1
Disinfect catch basin	1
Provide catch basin	10
Provide tile drain	3
Repair catch basin	3
Repair catch basin trap	1
Trap catch basin	4

F.

Clean bath trap	1
Clean vent pipe	1
Provide iron conductors	1
Provide water for wash basin	1
Provide water	4
Remove vent pipe from chimney	1
Remove wash basin	1
Renew plumbing	2
Repair bath	2
Repair plumbing	105
Repair vent pipe	5
Repair water pipe	8
Repair wash basin	1
Repair waste pipe	1
Trap bath	1
Trap cistern	2
Trap ice box, or disconnect	7
Trap wash basin	1

ORDERS PERTAINING TO VAULTS AND URINALS.

A.

Clean vault	1396
Disconnet vault from sewer	11
Disinfect vault	60
Fill vault	155
Provide water tight vault	69
Remove vault from lot line	10
Remove vault	3

B.

Clean urinal	4
Connect urinal	2
Disinfect urinal	3
Line urinal	1

Provide urinal	4
Provide water for urinal	4
Renew urinal	3
Repair urinal	5
Trap urinal	2
Ventilate urinal	1

ORDERS TO CEASE COMMITTING NUISANCE.

Cease burning grease and garbage	1
Cease burning hides and scrapings	2
Cease draining fish barrel on sidewalk	1
Cease draining slops to alley or street gutter	4
Cease drying bed clothes on porch	1
Cease drying rags in alley	1
Cease drying bedding in yard	1
Cease keeping poultry in basement	2
Cease killing poultry in basement	1
Cease rebuilding house in which scarlet fever exists	1
Cease running blood to sewer	1
Cease running night soil to sewer	1
Cease storing bones in basement	1
Cease throwing slop and waste water in alley	10
Cease throwing slops in yard	13
Cease throwing slops on roof	7
Cease using basement for water closet	2
Cease using basement for ice cream factory	1
Cease using water trough	1
Cease using well	2

ORDERS PERTAINING TO GARBAGE AND MANURE NUISANCES.

A.

Clean garbage box	2
Clean garbage chute	1
Disinfect garbage box	3
Provide ash box	56
Provide cover for garbage box	31
Provide garbage box	470
Remove garbage box	6
Remove garbage chute	4
Remove mixed garbage	26
Repair garbage box	1

B.

Provide manure box	353
Provide cover for manure box	46
Remove manure	118
Remove manure box	1
Repair manure box	4

MISCELLANEOUS ORDERS.

Bank house	7
Boil water before using	31
Cement walls on outside	1
Clean fish barrel	1
Citizens' complaints made	1487
Citizens' complaints dismissed	575
Clean alley	32
Clean and disinfect track	1
Clean and disinfect walk	2
Clean and fill cistern	28
Clean and lock house and shed	9
Clean and repair eave gutters and conductors	3
Clean basement cellar and premises	40
Clean cistern	11
Clean bath room	2
Clean dry well	1
Clean pen for poultry	9
Clean privy house	1
Clean water tank	1
Clean well	2
Clean yard	56
Confine poultry	1
Cover cistern	9
Destroy bedding	1
Disconnect water closet from alley	1
Disinfect chicken coop	3
Disinfect basement	4
Drain basement and cellar	4
Extend chimney	14
Extend cistern overflow	1
Extend ventilation shaft in workshop	1
Fill cistern	1
Fill or drain lot	7
Fill well	84
Provide dust collector	1
Provide eave gutters for house or barn	3
Provide heat for bath room	1
Provide lock for cistern cover	1
Provide new box for water meter	1
Provide wash rack	1
Referred to Board of Public Works	131
Remove barricades	3
Remove bones	1
Remove carcass of goat	1

Remove dogs	4
Remove dog house	1
Remove feathers from alley	1
Remove filth from alley	1
Remove filth from basement	1
Remove goat	1
Remove hogs	1
Remove horse or cow from yard	1
Remove horse from basement	1
Remove jelly	1
Remove night soil	2
Remove offensive barrels	5
Remove offensive grains	2
Remove offensive matter	3
Remove offensive poultry	35
Remove poultry coop	3
Remove rags from under house	1
Remove filth, rubbish and ashes	64
Remove shanty	1
Remove shed	1
Remove stagnant water	1
Remove wooden drain	4
Renew floor	6
Renew walk	1
Renew basement	1
Repair cistern	2
Repair floor	1
Repair furnace	1
Repair gas fixtures	1
Repair privy	9
Repair roof conductors	16
Repair stairs	3
Repair smoke stack	2
Replace privy	1
Spade in manure	2

Respectfully submitted,

T. H. CURTIS,

Chief Sanitary Inspector.

REPORT

OF

SECRETARY.

REPORT OF SECRETARY.

F. M. Schulz, M. D., Commissioner of Health:

SIR—Herewith I hand you tables showing business done during the year; rules and circulars issued and a synopsis of occurrences affecting your office.

Resolution to have 600 copies of the Annual Report for the year ending April, 1899, printed. Passed August 28, 1899.

Resolution to pay judgment of F. X. Schaeffer, $74.08, against the secretary, passed February 12, 1900.

Ordinance forbidding the distribution of sample packages of medicine or any compounded drug upon any lot, private dwelling, or any street or sidewalk, passed March 14, 1900.

CIRCULARS.

1899.

Jan. 25. Circular to physicians in relation to diagnoses of diphtheria.

May 1. Rules governing night scavenger work.

12. Chapter 313, State Law of 1899, governing the sale of pure milk and cream.

20. Rules for government of the Isolation Hospital.

June 1. In relation to school hygiene.

In relation to vaccination.

In relation to membraneous croup.

General rules for the management of infants during the hot season.

Circular to veterinary surgeons to comply with Section 200, Chapter 14, of General Ordinances of 1898, reporting animals afflicted with contagious diseases.

Nov. Circular to physicians concerning vital statistics.

1899. MONTH.	Calls.	General Complaints.	Citizens' Complaints.	Inspectors' Reports.	Complaints not verified.	General Orders issued.	Vault Orders.	Sewer Orders.	Total Orders.	Value of Meat and fish confiscated.	Value of Fruit and Vegetables confiscated.	Total Value of confiscation.	Cow-barn Inspections.	Cow-barn Orders.	Scavenger Permits.	Vaults cleaned voluntarily.
January	70	283	90	1,544	40	150	52	.....	202	$ 57.10	$266.50	$325.60	64	39	207	155
February	38	229	82	1,268	30	112	64	.....	176	102.20	2.00	104.20	5	3	204	140
March	33	183	71	1,434	24	88	53	.....	141	167.58	19.25	186.83	6	.....	272	219
April	25	405	157	1,295	57	157	96	26	279	97.30	.....	97.30	9	4	511	415
May	115	406	158	1,716	63	280	114	77	471	607.05	.....	607.05	37	32	524	410
June	99	709	189	1,830	90	360	161	44	565	88.02	7.50	95.52	2	2	443	282
July	131	756	176	2,005	60	370	210	41	621	110.40	44.50	154.90	48	12	455	245
August	129	695	155	2,120	58	579	212	32	823	190.25	4.75	195.00	1	1	486	274
September	126	461	105	1,783	47	276	183	21	480	184.16	31.50	215.66	.....	.....	422	239
October	103	414	118	1,822	46	221	137	32	390	178.45	.....	178.45	.....	.....	423	286
November	77	240	105	1,544	44	153	60	9	222	29.90	27.50	57.40	21	1	342	282
December	35	209	81	1,465	26	118	54	2	174	67.26	.....	67.26	2	.....	274	220
	981	4,990	1,487	19,826	575	2,864	1,396	284	4,544	$1,881.67	$403.50	$2,285.17	195	84	4,563	3,167

The following is a statement of receipts and expenditures of the Health Department for the year beginning January 1, 1899, and ending December 31, 1899:

Feb.	1.	January pay roll	$2,299.89
		Collecting and disposing garbage, January	4,453.22
		Land rent, disposing garbage	300.00
	27.	Repairs	6.00
		Printing	18.50
		Books and stationery	113.00
		Supplies	3.00
Mch.	1.	February pay roll	2,299.89
	13.	Collecting, etc., garbage, February	4,255.03
		Land rent, garbage disposal	200.00
		Repairs, garbage disposal	10.00
		Tools, rope, etc., garbage disposal	28.67
		Land rent, garbage disposal	45.82
		Groceries	28.32
		Coal	.50
		Meat	7.69
		Repairs	26.68
		Milk	7.00
		Telephone service, first quarter	55.00
		Supplies, etc	203.67
	27.	Printing	128.00
		Coal	3.00
		Postage stamps	58.05
Apr.	1.	March pay roll	2,299.89
	10.	Groceries	16.06
		Lighting, gas, first quarter	3.04
		Repairs	1.88
		Milk	2.90
		Collecting, etc., garbage, March	4,812.00
		Supplies, etc	127.26
	24.	Printing	28.50
		Meat	3.53
		Land rent, garbage disposal	266.66
		Coal	67.05
		Supplies, etc	18.20

May	1.	April pay roll	2,299.89
		April pay roll, garbage disposal	4,470.74
	8.	April pay roll, garbage disposal	200.00
		Land rent, garbage disposal	228.29
		Printing	42.50
		Books and stationery	12.75
		Supplies, etc	3.00
	22.	Groceries	9.19
		Meat	7.36
		Milk	7.10
		Supplies, etc	71.30
June	1.	May pay roll	2,391.55
		May pay roll, garbage disposal	4,897.75
	5.	Hardware, garbage disposal	21.71
		Services, garbage disposal	12.00
		Land rent, garbage disposal	200.00
		Printing	58.50
		Blank books	6.25
		Groceries	19.17
		Supplies, etc	51.35
		Telephone service, second quarter	55.00
	9.	Disposing garbage	125.00
		Burying, bedding, nursing, "smallpox patients"	188.55
		Removing night soil	12.00
	10.	Wagon repairs, copperas, garbage disposal	22.68
		Coal, garbage disposal	4.00
		Groceries	51.43
		Meat	18.95
		Milk	19.30
		Supplies, etc	89.22
July	1.	June pay roll	2,391.55
		June pay roll, garbage disposal	5,119.19
	3.	Land rent, garbage disposal	200.00
		Books	5.75
		Printing	47.50
	17.	Forks, garbage disposal	3.00
		Groceries	36.33
		Lighting, gas, second quarter	3.04
		Meat	12.98
		Milk	10.45
		Supplies, etc	113.83
	24.	Nursing smallpox patients	200.00
		Bedding to various parties	110.28
		Expenses while attending convention Boards of Health	75.00
	31.	Tool repairs	6.80

July	31.	Coal	89.40
		Printing	47.50
		Postage and internal revenue stamps	84.00
		Supplies, etc	43.60
Aug.	1.	July pay roll	2,391.55
		July pay roll, garbage disposal	5,391.25
	7.	Services, nursing smallpox patients	375.57
		Bedding and wrappers for smallpox patients	40.08
	14.	Land rent, garbage disposal	200.00
		Printing	83.00
		Photographing	4.03
		Groceries	21.12
		Meat	4.69
		Milk	4.75
		Lumber	7.56
		Supplies, etc	69.21
	28.	Printing	22.00
		Postage stamps	8.00
		Supplies	36.66
		Copperas and repairs, garbage disposal	104.08
Sept.	1.	August pay roll	2,391.55
		August pay roll, garbage disposal	5,607.50
	11.	Pumps, garbage disposal	18.00
		Land rent, garbage disposal	200.00
		Groceries	16.54
		Meat	5.74
		Milk	5.35
		Telephone service, third quarter	40.99
		Supplies, etc	3.70
	25.	Hose and paint, garbage disposal	45.50
		Printing	5.50
		Repairs	2.00
		Groceries	8.61
		Supplies, etc	17.43
Oct.	1.	September pay roll	2,431.55
		September pay roll, garbage disposal	5,416.00
	11.	Repairs and weighing garbage	13.00
		Land rent, garbage disposal	200.00
		Supplies, etc	80.76
	23.	Repairs and copperas, garbage disposal	40.79
		Groceries	35.24
		Repairs	32.75
		Lighting, gas, third quarter	3.84
		Milk	77.70
		Printing report	182.25
		Supplies, etc	.55

Nov.	1.	October pay roll	2,431.55
		October pay roll, garbage disposal	4,898.75
	6.	Paint and supplies, garbage disposal	39.88
		Land rent, garbage disposal	200.00
		Printing	18.50
		Blank book	8.00
		Supplies	150.45
	27.	Nursing patients at hospital	88.57
Dec.	1.	November pay roll	2,431.55
		November pay roll, garbage disposal	4,613.75
	4.	Printing	49.00
		Groceries	28.93
		Meat	17.25
		Milk	8.70
		Postage stamps	86.40
		Supplies, etc	164.71
		Land rent, garbage disposal	200.00
	18.	Repairs, etc., garbage disposal	4.95
		Groceries	46.59
		Coal	92.35
		Repairs	50.05
		Milk	13.50
		New typewriter	62.75
		Supplies, etc	181.71
	30.	December pay roll	2,431.55
		December pay roll, garbage disposal	4,486.75
1900.			
Jan.	2.	Paint and hardware, garbage disposal	41.55
		Land rent, garbage disposal	126.80
		Supplies	52.00
	15.	Weighing, repairs, garbage disposal	3.30
		Land rent, garbage disposal	125.80
		Coal, garbage disposal	5.00
		Groceries	50.85
		Postage stamps	16.10
		Printing	70.75
		Repairs	72.73
		Lighting, gas, fourth quarter	3.44
		Meat	26.55
		Milk	11.95
		Lumber	15.44
		Coal	105.00
		Telephone service, fourth quarter	44.50
		Supplies, etc	245.91
		Books and stationary	110.41
			$95,968.28

RECAPITULATION.

Salaries	$27,452.04
Isolation hospital	3,285.92
Garbage	61,883.21
Laboratory	326.89
Printing, etc.	1,455.81
Anti-toxine	228.27
Disinfectants	257.26
Incidentals	1,078.88
	$95,968.28

Respectfully submitted,

FRANK B. SCHUTZ,

Secretary.

F. M. SCHULZ, M. D.,

Commissioner of Health.

Sir:—I submit the following report of the work done in the collection and disposal of garbage and dead animals from January 1st, to December 1st, 1899, showing the number of teams and laborers employed and the amount of garbage and dead animals collected and disposed of.

Month. 1899.	Single loads collected.	Double loads collected	Laborers Employ'd.	Average No. Days.	Single Teams.	Double Teams.
January	1,998	278	17	14	52	15
February	1,945	294	15	16½	53	14
March	2,119	374	16	15	53	15
April	1,935	350	21	19¼	54	13
May	2,137	374	15	22	52	17
June	2,428	365	15	20	52	17
July	2,652	364	13	24¼	52	17
August	2,762	371	13	25	52	16
September	2,631	349	13	25	53	16
October	2,248	328	14	23⅓	51	15
November	2,202	266	14	23	51	14
December	1,921	278	13	23	51	14
	26,978	3,991				

Small animals collected 4456.

Large animals collected 294.

Amount of garbage and dead animals collected in tons, 29,861.

Respectfully submitted,

JAS. GRAHAM,

Supt. Collection and Disposal of Garbage.

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MILWAUKEE.

(Twenty-Fourth Annual Report of the Department.)

APRIL, 1901.

MILWAUKEE:
The Edw. Keogh Press, 347-349 Broadway.
1901.

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1901.

OFFICERS AND EMPLOYES

OF THE

Health Department of the City of Milwaukee

FOR THE

YEAR ENDING APRIL 16TH, 1901.

Commissioner of Health,

F. M. SCHULZ, PH. G. M. D.

Medical Assistants to Commissioner of Health,

ARTHUR J. PATEK, M. D., LOUIS F. JERMAIN, M. D.,

GILBERT E. SEAMAN, M. D.,

CHARLES J. COFFEY, M. D., JAMES H. HACKETT, M. D.

Food Analyst,

W. C. BENNETT, M. D.

Registrar of Vital Statistics,

JOHN W. COON, M. D.

Secretary,

FRANK B. SCHUTZ.

Clerk,

E. W. DIERCKS.

Registration Clerk,

MISS BELLE REESE.

Confidential Secretary,

MISS HELEN WILSON.

Stenographer,

MISS N. H. TAYLOR.

OFFICERS AND EMPLOYES—CONTINUED.

Sanitary Police,

T. H. CURTIS, Chief Sanitary Inspector.

DAVID THOMAS, Chief of Disinfecting Corps.

G. E. ADAMS, Garbage Inspector.

F. J. CARNEY, Meat Inspector.

F. FALBE, Meat Inspector.

PHIL. STOCK, Meat Inspector.

ED. MCGRATH, Meat Inspector.

H. KEIHL,

J. O. OSMUNSON,

J. F. CUNNINGHAM,

E. SEAMAN,

W. FREMONT,

C. F. KRUCKENBERG,

JACOB H. SCHULTZ,

P. J. KING,

J. CAMPBELL,

O. E. KLEIN,

T. BOUTIN,

JOHN DOLGE.

Matron to City Isolation Hospital for Contagious Diseases,

MISS J. C. WEHRMAN.

Cook to City Isolation Hospital,

SARAH HAISLER.

Janitor to City Isolation Hospital,

MIKE HAISLER.

COMMITTEE ON HEALTH

OF THE

BOARD OF ALDERMEN.

E. A. Wittig,

P. J. Grogan,

J. Maciolek,

Wm. Murphy,

W. H. Graebner,

Arthur A. McCormack,

Henry Laack.

REPORT.

To the Honorable the Mayor and Common Council of the City of Milwaukee:

GENTLEMEN—I have the honor to transmit herewith my report of the operations of this department, together with the reports of the Secretary, the Registrar of Vital Statistics, the Food Analyst and of the Chief Sanitary Inspector, for the year ending April 16, 1901, being the twenty-fourth annual report of this department.

The total number of births reported for registration during the year 1900 was 7,492—3,880 males and 3,612 females; 7,484 white and 8 colored.

The annual birth rate per 1,000 of the population is 25.82.

During the year 1900 Milwaukee has maintained its former reputation for healthfulness. The total number of deaths reported was 4,026, representing an annual death rate on an estimated population of 290,000 of 13.88. Of this number 2,111 were males and 1,915 females.

The deaths of children under one year of age numbered 1,247, and under five years of age 1,731, giving an infant mortality of 42.99.

The number of deaths by wards is as follows:

First ward	104
Second ward	118
Third ward	68
Fourth ward	165
Fifth ward	126
Sixth ward	156
Seventh ward	83
Eighth ward	200
Ninth ward	235
Tenth ward	188

Eleventh ward	266
Twelfth ward	188
Thirteenth ward	232
Fourteenth ward	335
Fifteenth ward	115
Sixteenth ward	103
Seventeenth ward	126
Eighteenth ward	197
Nineteenth ward	184
Twentieth ward	271
Twenty-first ward	155
Hospitals	411

The following table shows the number of deaths from some of the leading diseases during the last seven years:

	1894.	1895.	1896.	1897.	1898.	1899.	1900.
Typhoid Fever	70	63	46	31	46	47	59
Measles	69	1	29	36	2	26	36
Scarlet Fever	12	5	4	3	2	36	70
Whooping Cough	69	60	15	19	53	9	46
Diphtheria	237	179	198	106	61	109	124
Pulmonary Tuberculosis	354	288	335	346	316	272	373
Cancer	107	139	158	164	166	194	196
Meningitis	107	82	96	70	108	123	72
Apoplexy	90	90	108	92	107	120	139
Convulsions	250	239	246	191	127	144	140
Organic Heart Disease	143	161	185	212	190	228	227
Bronchitis	169	181	189	193	182	173	180
Pneumonia	245	271	237	239	227	281	299
Diarrhœal Diseases	348	323	398	244	350	400	439
Nephritis	77	95	106	110	106	132	121
Congenital Debility	415	364	374	217	194	244	323
Senile Debility	124	116	108	123	84	69	78
Suicides	46	48	58	62	62	49	59
Accidents	119	145	143	125	116	155	152

MILK.

During the year 1900 the number of samples of milk collected for analysis was 5,614, showing an average of 3.77 of butter fat. This is a

slight improvement over 1899. In fact, since 1896, when steps towards a proper systematized method for milk inspection was instituted, a decided improvement in the quality of this article has been observed.

The lowering of infant mortality during the last five years is, I believe, directly traceable to the better quality of milk furnished to the consumer.

Of the 5,614 samples of milk examined during 1900, 149 samples were found to contain less than the required 3 per cent. of butter fat, giving a percentage below the legal standard of 2.66, as against 3.92 for 1899.

Of the whole number of samples examined 1,972 were taken at the several depots by our inspectors, and showed an average of 3.81 of butter fat, as against 3.76 of samples taken throughout the city.

The custom of examining the milk directly upon its arrival at the depot, and of dumping the contents of all cans that were found to be either below the regular standard, or filthy, seems to have had a very beneficial effect upon the outside shippers. As our jurisdiction does not extend beyond the city limits, this seemed the only means by which we were able to reach such parties, and it proved to be decidedly effective.

During the year 48 arrests were made of parties found selling milk below the standard, and $725.00 were imposed as fines.

The number of analyses of cream made during 1900 was 906, as against 276 for 1899. The average of butter fat was 19.46 per cent.

Cream has heretofore been sold without restrictions, as the present ordinance covers only the sale of milk. It has occurred repeatedly that samples of so-called cream were examined in this department that showed as low an average as 6 and 7 per cent. of butter fat. This ordinance should be amended so as to include cream, and the legal standard should be fixed at least at 18 per cent.

SCARLET FEVER.

At the beginning of the year scarlet fever was present in epidemic form, 382 cases of this disease being reported to the department in January, 327 cases in February, and 278 cases in March. The total number of cases reported during the year was 1,726, seventeen of which terminated fatally. The increase to thirty days in the time of quarantine was attended with gratifying results, as the number of cases began to decrease immediately after its inauguration. Desquamation and other sources of contagion, such as discharges from nose and ears of patient, often persist for an undue length of time in this disease, and unless the period of quarantine is of sufficient duration they become important factors in the spread of this disease.

DIPHTHERIA.

During the year 716 cases of diphtheria were reported, with 124 deaths, a percentage of 17.1. In 1894 the percentage of deaths was 37.8; in 1895, 19.6; in 1896, 21.5; in 1897, 19.6; in 1898, 17.7, and in 1899, 13.7. This gradual decline in the death rate of diphtheria must be attributed mainly to the more general use of antitoxine, and although the results from its use are extremely gratifying a still greater reduction in the death rate would undoubtedly result if the remedy could be used earlier in the disease, and in larger doses than has heretofore been the practice.

MEASLES.

During the year 403 cases of measles were reported, with 36 deaths, a percentage of 8.9. Last year 312 cases were reported, with 26 deaths, a percentage of 8.3.

SMALLPOX.

Although smallpox was present in epidemic form in the state and in practically all the surrounding states, we were fortunate in escaping any marked invasion of this city. Two cases of this disease were reported

during the year, with no deaths, and in each case active measures to prevent the spread of the affection were rewarded with success.

The mild character in which the disease manifested itself made it extremely difficult to properly control and quarantine all the cases, and the result has been a gradual increase in the number of cases reported, both in this and neighboring states. Should the disease change into a more malignant type (which may occur at any time), serious results would be inevitable.

Although Milwaukee has been fortunate so far in escaping any serious outbreak of this disease, we may expect at any time, either through an unrecognized or a concealed case, to be confronted with an outbreak, and in this emergency must be prepared to cope successfully with the disease. Our present facilities at the isolation hospital are inadequate to properly manage and take care of all contagious diseases that may demand admission during an epidemic of smallpox.

In a communication, dated May 7th, 1900, I requested your honorable body to take immediate steps toward the erection of a cottage near the Isolation Hospital in the Eleventh ward. Opposition manifested itself to this plan, and by resolution of the Common Council the Commissioner of Health was authorized to rent a building to be used for hospital purposes. At the present time we are conducting two separate hospitals at a double cost to the taxpayers of the city.

The demands made on the Isolation Hospital have been increasing from year to year, and it is certain that in the near future it will be impossible to accommodate all who, as a matter of precaution, must be sent there.

I would recommend, therefore, either that your honorable body authorize and direct the Board of Public Works to erect a suitable building on the site of the present Isolation Hospital, or that the city of Milwaukee acquire land in some uninhabited portion near the city limits on which to erect a new Isolation Hospital on the cottage plan system,

with all modern improvements and appliances for the proper treatment of all contagious diseases.

TUBERCULOSIS.

In last year's report on this subject, mention was made of the necessity for reducing the number of cases of tubercular diseases, and the ease with which this certainly could be attained if the suggestions offered were followed. In order to effect such a happy result, it is absolutely necessary that there be:

First: Certain laws bearing upon the notification of cases of tuberculosis.

Second: The co-operation of the medical profession with the Health Department.

Third: The co-operation of the city authorities with the Health Department; and

Fourth: The educating of the public to an understanding of the real reasons for and the benefit accruing to it by these measures.

Let me go into some slight detail in elucidation of the points mentioned. So much has been said in previous reports concerning the contagiousness of tuberculosis, that further comment upon this matter is superfluous. It has been so conclusively proven that tuberculosis is a communicable disease, that we may take it for granted that this is thoroughly understood and accepted.

In speaking of the notification of tuberculosis, I do not wish it understood that this word is used synonymously with quarantining; in fact, I am decidedly opposed to such a measure as being unnecessarily harsh to a patient suffering from a chronic illness, and because enough can be accomplished without going to this extreme.

Notification of the existence of tuberculosis ought to be made so that the patient can be properly instructed in the best methods of caring for his own health, from the standpoint of hygiene, and also that relatives and attendants upon such a patient may be taught the very easy and

efficacious way of protecting themselves against the contraction of a disease so insidious in its onset and so menacing to life.

Thus you see such a course can work no possible hardship upon an invalid; on the contrary, a positive benefit must accrue to him and to others, because the directions embodied in these printed circulars are simply to contain information such as the attending physician unfortunately often neglects to give, and they would simply be supplementary to medical treatment. Notification of tuberculosis is neither new nor in the experimental stage, for it is being used with much benefit in other localities.

The *modus operandi* of notification may be about as follows: As soon as the physician's report of a case of tuberculosis is received, the patient is visited by one of the health inspectors. The invalid is given printed instruction bearing upon his illness and the manner of protecting himself from further invasion if possible; how to protect others, and keep his surroundings in a healthy condition. If it is deemed desirable by the physician in charge that the knowledge of his having consumption be withheld from a patient, then it is a solemn obligation that we owe the invalid's attendants, to make them aware of their danger, and they should be given instructions for their guidance. When thought desirable or necessary, an occasional visit could be made by a health inspector to aid in enforcing these plans. This whole matter is in reality so simple, so devoid of harshness and publicity and of meddlesome interference, that it must appeal to you as rational in design and feasible of execution.

The co-operation of the physician is of course needed, and though there is much negligence on the part of most physicians upon matters pertaining to questions of hygiene, yet the great majority could easily be persuaded to follow up this plan when once it is firmly launched.

The city of Milwaukee must, of course, lend moral support to the Health Department, so that if when such a measure requiring notifica-

tion of the existence of tuberculosis be passed, the good effect of this act will not be entirely lost.

Lastly, the public must be educated to a proper understanding of the sources of tuberculosis and its danger, and when this is accomplished, and it can easily be done by means of printed circulars, there will and can be no further obstacle blocking the path that must inevitably lead to an amelioration of the condition of the invalid, the removal of the danger of contracting the disease, and consequently diminution in the number of tuberculosis sufferers. These are points that must be well borne in mind and demand your earnest consideration, because they are, indeed, important.

Our statistics show tuberculosis to be on the increase, and I append a table giving in detail the convincing figures. Over 10 per cent. of all deaths in this city are due to tuberculosis, and this is appalling when one appreciates that a due amount of care and the enforcement of rules such as I have detailed ought easily reduce this mortality in the next decade to one-half the present number. Furthermore, these figures show tuberculosis to be on the increase, and this sad fact deserves severe condemnation when we consider that the city's general hygienic development has in the past two decades been very marked.

One other matter that I wish to briefly touch upon is the expectoration in public places. This matter has been mentioned in a previous report in greater detail, but I wish to remind you that the dried expectoration of consumptives is the carrier par excellence of the contagion, and until measures are introduced whereby this nuisance of the street and public places is abated, we must not expect the result that, with the enforcement of such measures, could be accomplished.

YEAR.	Phthisis Pulmonalis.	Other Tubercular.	Total.	Total deaths all Causes.	Per cent. of Tubercular to Total.			
1871	105	14	119	1,743	6.86			
1872	115	27	142	2,115	6.72			
1873	136	30	166	2,026	8.19	7.50		
1874	136	18	154	2,078	7.41			
1875	117	23	140	1,651	8.48		8.92	
1876	127	29	156	2,271	6.87			
1877	189	23	212	2,243	9.45			
1878	175	39	214	1,774	12.06	10.20		
1879	170	70	240	1,965	12.21			
1880	184	80	264	2,390	11.05			
1881	202	159	361	2,697	13.38			
1882	207	179	386	2,729	14.14			
1883	199	133	332	2,532	13.11	11.96		
1884	220	38	258	2,768	9.32			
1885	238	43	281	2,796	10.05		10.98	10.41
1886	246	64	310	3,021	10.26			
1887	281	49	330	3,257	10.13			
1888	289	58	347	3,426	10.12	10.18		
1889	284	47	331	3,188	10.38			
1890	294	83	377	3,747	10.07			
1891	318	101	419	4,689	8.93			
1892	314	105	419	4,516	9.28			
1893	262	99	361	4,462	8.09	9.56		
1894	354	127	481	4,253	11.31			
1895	288	117	405	3,885	10.42		10.72	
1896	335	110	445	3,904	11.39			
1897	346	102	448	3,606	12.42			
1898	316	114	430	3,338	12.85	12.08		
1899	372	109	471	3,843	12.26			
1900	373	95	468	4,026	11.60			

TYPHOID.

There have been several epidemics of typhoid fever during the past year, the total number of cases being much in excess of that of the previous year. Each of these epidemics, however, was distinctly

traceable to a probable source, in one case a positive one,—contaminated milk supply.

In an epidemic in the Fifteenth and Sixteenth wards there was a total of 113 cases. Almost all of these occurred in the route of a single dairyman, and upon an inspection made of his premises, a member of his family was discovered to be suffering from typhoid fever.

A second epidemic occurred in the Eleventh, Twelfth and Fourteenth wards, a total of 73 cases. The actual source of these cases was not definitely ascertained, but the fact that the epidemic then occurred in the route of one milkman seemed to clearly place the blame here.

Of a third series of 19 cases in the Eighteenth ward, the actual source could not be definitely ascertained, though suspicion pointed strongly to the premises of a milkman in whose route a majority of these cases occurred.

As has been said on previous occasions, pure water and pure milk are the essentials for stamping out of typhoid fever. A little care on the part of the dairyman and a desire to serve as clean milk as is possible to do, would soon reduce to a minimum the cases of typhoid fever. I truly believe that could this element of danger be removed, the time would not be far distant when typhoid fever would be a disease of very rare occurrence—a medical curiosity.

Respectfully submitted,

F. M. SCHULZ.

BUREAU OF VITAL STATISTICS.

F. M. Schulz, M. D., Commissioner of Health:

SIR—I herewith present for your consideration the twenty-fourth annual report of the vital statistics of the city of Milwaukee for the year ending December 31, 1900.

DEATHS.

The number of deaths reported in the city for the year 1900 was 4,026. The estimated population to the middle of the year is 290,000, and the annual death rate based upon this estimate is 13.88 per thousand. For the year 1899 there were 3,843 deaths, and the death rate, upon an estimated population of 285,000, was 13.48 per thousand.

The small number of deaths in excess of those for 1899 can not be ascribed to any particular cause, nor were they confined to any particular portion of the city, but rather there was a slight increase in the number dying from a number of diseases.

Following is a table showing the number of deaths and the annual death rate of the city for the past ten years:

Year.	Population.	Deaths.	Annual Rate.
1891	214,000	4689	21.91
1892	223,000	4516	20.25
1893	232,000	4462	19.23
1894	241,000	4253	17.64
1895	250,000	3885	15.54
1896	260,000	3904	15.00
1897	275,000	3606	13.11
1898	280,000	3338	11.92
1899	285,000	3843	13.48
1900	290,000	4026	13.88

From the foregoing table it will be seen that the average population for the ten year period was 255,000 and the average number of deaths 4,052. This gives an average annual death rate of 15.89 per thousand, or 2.01 more than for the year just past.

Of the 4,026 deaths, 2,111 were males and 1,915 females, the proportion being 52.5 males and 47.5 females.

By reference to Table No. 1, it will be seen that of the total number of deaths reported, 2,328 or 57% were single, 1,141 or 28% were married, and 557 or 15% were widowed, 2,108 or 52% were born in Milwaukee, 561 or 14% in other portions of the United States, and 1,357 or 34% were of foreign birth. Of the latter, 839, or 28% of the whole, were born in Germany.

The four wards having the lowest mortality were the Nineteenth, Fifteenth, Eighth and Sixteenth, the death rate being respectively 8.94, 9.04, 10.33 and 10.66. The four wards having the highest death rate were the Fourteenth, Twentieth, Fourth and Twelfth, the death rates being respectively 16.14, 16.02, 15.43 and 14.18.

An inspection of Table No. 14 will show in detail, for the different wards, the number of deaths, death rate and number of deaths from some of the most important causes.

BIRTHS.

During the year 1900 there were reported 7.492 births, which number represents an annual birth rate of 25.83 per thousand population.

There has been a steady decline in the birth rate of the city for the past eight years, as will be seen by reference to Table No. 23. I am of the opinion that these figures represent an actual decrease in the births occurring, rather than neglect of the proper persons to make reports of births.

MARRIAGES.

During the year 1900 there were recorded 2,349 marriages, as compared with 2,810 for the preceding year. This decrease is due to the

effects of the so-called True marriage license law, which did not go into effect until May 1st, 1899, so that the number of marriages of the first five months of 1889 were considerable in excess of those reported for the same months of 1900, the actual number for the period being 1,202 for 1899 and 772 for 1900.

On the following pages will be found various tables setting forth in detail analyses of the vital statistics as recorded during the year.

Respectfully,

J. W. COON, M. D.,

Registrar Vital Statistics.

STATISTICAL TABLES.

TABLE No. 1.

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the year 1900.
The Annual Death Rate per 1,000 for the year was 13.88 on an estimated population of 290,000.
For the year 1899 there were 3,843 deaths, representing an Annual Death Rate of 13.48 per 1,000 population.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.												
		Male.	Female.	Single.	Married.	Widowed.	Milwaukee.	U. S. other than Mil.	Foreign.	Under 1 year.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
TOTAL—All Causes	4026	2111	1915	2328	1141	557	2108	561	1357	1247	484	143	177	283	287	319	251	304	357	152	21	1
GENERAL DISEASES	1129	537	592	601	411	117	527	213	389	96	192	75	94	159	124	132	96	83	60	17	1	....
Typhoid Fever	59	35	24	33	21	5	25	18	16	....	2	1	19	16	9	4	4	3	1	....	....	....
Measles	36	15	21	36	....	....	32	4	....	9	24	3	....	....	....	....	....	....	....	....	....	....
Scarlet Fever	70	32	38	69	1	....	61	8	1	4	42	21	2	....	1	....	....	....	....	....	....	....
Whooping Cough	46	14	32	46	....	....	42	4	....	26	20	....	....	....	....	....	....	....	....	....	....	....
Diphtheria and Membranous Croup	124	67	57	122	1	1	113	9	2	5	65	37	14	1	2	....	....	....	....	....	....	....
Other Epidemic Diseases	5	2	3	1	3	1	1	....	4	1	....	....	....	....	....	....	....	3	1	....	....	....
Pulmonary Tuberculosis	373	192	181	156	194	23	136	95	142	9	5	4	42	123	83	58	21	13	14	1	....	....
Other Tubercular Diseases	95	45	50	66	21	8	56	21	18	21	22	5	5	12	10	9	4	3	3	1	....	....
Cancer	196	72	124	13	126	57	12	28	156	....	1	....	1	....	12	42	53	45	32	9	1	....
Other General Diseases	125	63	62	59	44	22	49	26	50	21	11	4	11	7	7	19	14	16	10	5	....	....
LOCAL DISEASES	2683	1393	1290	1637	628	418	1520	303	860	1147	280	57	56	96	123	141	132	207	290	133	20	1
Meningitis	72	38	34	60	8	4	56	5	11	17	30	6	5	5	1	3	1	3	1	....	....	....
Apoplexy	139	66	73	6	68	65	3	25	111	....	....	....	....	....	10	11	12	30	54	21	1	....
Other Diseases of Brain and Membrane	50	30	20	25	19	6	22	7	21	10	5	2	1	6	4	5	6	2	8	....	1	....
Paralysis	12	4	8	1	6	5	1	3	8	....	....	....	....	....	1	3	1	2	2	2	1	....
Convulsions	140	74	66	140	....	....	138	2	....	120	20	....	....	....	....	....	....	....	....	....	....	....
Other Nervous Diseases	18	9	9	5	7	6	5	6	7	1	1	....	1	1	1	3	2	3	4	....	1	....

LOCAL DISEASES—Continued.																						
Organic Heart Diseases	227	106	121	53	108	66	39	40	148	8	6	5	14	7	15	26	34	40	52	18	2	....
Other Diseases of Circulatory System	48	28	20	4	24	20	.....	12	36	....	....	....	1	....	3	3	7	12	17	4	1	....
Bronchitis	180	83	97	127	22	31	116	13	51	104	18	1	....	2	1	2	2	13	23	13	1	....
Pneumonia	299	154	145	177	80	42	157	43	99	80	62	14	6	13	18	25	9	30	30	11	1	....
Broncho-Pneumonia	77	40	37	65	4	8	57	7	13	40	21	2	1	....	1	1	....	1	6	4	....	....
Asthma	20	11	9	1	7	12	.....	1	19	....	....	....	....	....	....	2	2	6	9	1	....	....
Pleurisy	8	4	4	5	3	.....	5	1	2	1	2	2	....	....	....	2	....	1	....	....	....	....
Other Respiratory Diseases	34	21	13	20	13	1	19	5	10	6	7	4	....	3	2	5	3	3	1	....	....	....
Gastritis	51	36	15	34	6	11	33	2	16	26	6	....	1	....	2	....	4	5	5	2	....	....
Diarrhœal Diseases	439	256	183	418	9	12	384	34	21	343	71	2	2	1	....	....	5	4	7	4	....	....
Appendicitis and Peritonitis	68	35	33	41	26	1	32	13	23	4	3	9	14	16	9	7	....	6	....	....	....	....
Hernia and Intestinal Obstruction	35	19	16	8	21	6	7	6	22	3	3	....	2	....	6	3	5	5	6	2	....	....
Cirrhosis of Liver	19	10	9	2	12	5	1	5	13	....	....	....	....	....	1	7	4	3	4	....	....	....
Other Digestive Diseases	75	36	39	47	18	10	42	10	23	32	8	2	....	6	3	2	6	10	4	2	....	....
Nephritis	121	67	54	37	57	27	33	22	66	4	12	7	5	6	11	17	21	13	21	4	....	....
Other Urinary Diseases	30	20	10	4	13	13	8	1	21	3	....	1	....	1	2	2	3	7	9	2	....	....
Diseases of Female Generative System	20	.....	20	3	15	2	5	5	10	....	....	....	....	5	7	5	2	1	....	....	....	....
Puerperal Septicæmia	35	.....	35	2	33	.....	5	11	19	....	....	....	1	16	17	1	....	....	....	....	....	....
Other Diseases of Pregnancy	21	.....	21	.....	20	1	3	6	12	....	....	....	....	8	8	5	....	....	....	....	....	....
Diseases of Skin and Cellular Tissue	33	18	15	19	8	6	19	1	13	14	3	....	2	....	....	....	3	5	1	4	1	....
Locomotor System	1	.....	1	.....	1	.....	.....	1	.....	....	....	....	....	....	....	1	....	....	....	....	....	....
Malformations	10	7	3	10	.....	.....	10	.....	.....	9	1	....	....	....	....	....	....	....	....	....	....	....
Congenital Debility	323	183	140	323	.....	.....	320	3	.....	322	1	....	....	....	....	....	....	....	....	....	....	....
Senile Debility	78	38	40	.....	20	58	.....	13	65	....	....	....	....	....	....	....	....	2	27	38	10	1
VIOLENCE	214	181	33	90	102	22	61	45	108	4	12	11	27	28	40	46	22	15	7	2	....	....
Suicides	59	47	12	12	40	7	3	19	37	....	....	....	1	10	12	18	8	8	1	1	....	....
Accidental	152	131	21	75	62	15	57	25	70	4	12	11	26	17	27	27	14	7	6	1	....	....
Homicides	3	3	.....	3	.....	.....	1	1	1	....	....	....	....	1	1	1	....	....	....	....	....	....

TABLE No. 2.

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of January, 1900.

The Annual Death Rate for the month was 14.24 on an estimated population of 285,000.

During the month there were 88 deaths less than for the corresponding month of 1899.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.												
		Male.	Female.	Single.	Married.	Widowed.	Milwaukee.	U. S other than Mil.	Foreign.	Under 1 year.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
TOTAL—All Causes	344	178	166	199	98	47	180	47	117	106	45	13	15	26	21	24	23	24	32	14	....	1
GENERAL DISEASES	93	52	41	55	32	6	46	17	30	10	23	6	9	10	8	8	8	7	2	2	....	....
Typhoid Fever	5	3	2	2	3	....	1	3	1	....	....	....	1	1	3	....	....	....	....	....	....	....
Measles	5	2	3	5	....	....	4	1	....	1	4	....	....	....	....	....	....	....	....	....	....	....
Scarlet Fever	11	6	5	11	....	....	9	2	....	2	6	3	....	....	....	....	....	....	....	....	....	....
Whooping Cough	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Diphtheria and Membranous Croup	16	9	7	16	....	....	13	3	....	1	9	3	2	1	....	....	....	....	....	....	....	....
Other Epidemic Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Pulmonary Tuberculosis	20	12	8	9	10	1	7	4	9	....	....	....	4	8	1	3	3	....	....	1	....	....
Other Tubercular Diseases	6	3	3	2	3	1	2	2	2	1	....	....	1	....	3	1	....	....	....	....	....	....
Cancer	15	6	9	....	13	2	1	....	14	....	....	....	....	....	....	4	5	4	1	1	....	....
Other General Diseases	15	11	4	10	3	2	9	2	4	5	4	....	1	....	1	....	....	3	1	....	....	....
LOCAL DISEASES	232	110	122	137	56	39	129	26	77	95	21	6	5	14	9	9	12	18	30	12	....	1
Meningitis	6	4	2	5	1	....	5	....	1	1	2	1	1	....	....	1	....	....	....	....	....	....
Apoplexy	9	5	4	....	3	6	....	....	9	....	....	....	....	....	....	....	2	1	3	3	....	....
Other Diseases of Brain & Membranes	5	3	2	3	1	1	3	....	2	....	1	....	....	1	1	....	....	....	2	....	....	....
Paralysis	1	....	1	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	1	....	....
Convulsions	23	16	7	23	....	....	23	....	....	22	1	....	....	....	....	....	....	....	....	....	....	....
Other Nervous Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

LOCAL DISEASES—Continued.																					
Organic Heart Diseases	16	3	13	5	2	9	4	1	11	1	....	....	2	2	....	....	2	4	4	1	....	....
Other Diseases of Circulatory System	8	3	5	1	6	1	....	2	6	....	....	....	....	....	....	2	3	....	3	....	....	....
Bronchitis	29	10	19	21	3	5	20	2	7	17	3	1	....	....	1	....	....	3	4	....	....	....
Pneumonia	30	12	18	16	8	6	16	4	10	8	6	....	....	2	2	3	1	3	4	1	....	....
Broncho-pneumonia	8	5	3	5	2	1	3	2	3	3	1	1	....	....	....	....	....	1	1	1	....	....
Asthma	1	1	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....	1	....	....	....	....
Pleurisy	2	1	1	2	....	....	1	1	....	1	1	....	....	....	....	....	....	....	....	....	....	....
Other Respiratory Diseases	4	2	2	3	1	....	3	1	....	1	1	1	....	....	....	1	....	....	....	....	....	....
Gastritis	2	2	....	2	....	....	2	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....
Diarrhœal Diseases	13	10	3	12	....	1	11	1	1	8	3	1	....	....	....	....	....	....	....	1	....	....
Appendicitis and Peritonitis	8	4	4	6	2	....	4	3	1	....	1	1	2	2	1	....	....	1	....	....	....	....
Hernia and Intestinal Obstruction	4	1	3	1	3	....	....	1	3	....	1	....	....	....	....	1	1	1	....	....	....	....
Cirrhosis of Liver	1	....	1	....	1	....	....	....	1	....	....	....	....	....	....	....	....	1	....	....	....	....
Other Digestive Diseases	1	1	....	1	....	....	1	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....
Nephritis	9	4	5	....	7	2	....	3	6	....	....	....	....	....	2	1	2	1	3	....	....	....
Other Urinary Diseases	4	2	2	....	3	1	1	....	3	....	....	....	....	1	....	....	....	1	2	....	....	....
Diseases of Female Generative System	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Puerperal Septicæmia	4	....	4	....	4	....	1	2	1	....	....	....	....	3	1	....	....	....	....	....	....	....
Other Diseases of Pregnancy	3	....	3	....	3	....	....	2	1	....	....	....	....	2	1	....	....	....	....	....	....	....
Diseases of Skin and Cellular Tissue	4	3	1	3	1	....	3	....	1	3	....	....	....	....	....	....	1	....	....	....	....	....
Locomotor System	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Malformations	3	2	1	3	....	....	3	....	....	3	....	....	....	....	....	....	....	....	....	....	....	....
Congenital Debility	25	12	13	25	....	....	25	....	....	25	....	....	....	....	....	....	....	....	....	....	....	....
Senile Debility	9	4	5	....	4	5	....	1	8	....	....	....	....	....	....	....	....	....	4	4	....	1
VIOLENCE	19	16	3	7	10	2	5	4	10	1	1	1	1	2	4	7	2	....	....	....	....	....
Suicides	2	2	....	....	2	....	1	....	1	....	....	....	....	....	1	1	....	....	....	....	....	....
Accidents	16	13	3	6	8	2	4	4	8	1	1	1	1	2	3	5	2	....	....	....	....	....
Homicides	1	1	....	1	....	....	....	....	1	....	....	....	....	....	....	1	....	....	....	....	....	....
Other Causes and Ill-defined	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

TABLE No. 3.

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of February, 1900.

The Annual Death Rate for the month was 16.42 on an estimated population of 285,000.

During the month there were 20 deaths more than for the corresponding month of 1899.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.												
		Male.	Female.	Single.	Married.	Widowed.	Milwaukee.	U. S. other than Mil.	Foreign.	Under 1 year.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
TOTAL—All Causes	360	180	180	200	112	48	182	46	132	103	46	17	19	18	26	30	18	24	41	15	3	....
GENERAL DISEASES	111	50	61	67	39	5	58	22	31	11	25	13	11	12	12	8	5	5	8	1	....	....
Typhoid Fever	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Measles	5	3	2	5	....	....	4	1	....	1	2	2	....	....	....	....	....	....	....	....	....	....
Scarlet Fever	14	5	9	13	1	....	12	1	1	....	7	6	....	....	1	....	....	....	....	....	....	....
Whooping Cough	7	4	3	7	....	....	7	....	....	6	1	....	....	....	....	....	....	....	....	....	....	....
Diphtheria and Membranous Croup	13	3	10	12	1	....	11	1	1	....	8	3	1	....	1	....	....	....	....	....	....	....
Other Epidemic Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Pulmonary Tuberculosis	42	22	20	16	23	3	13	12	17	1	2	....	7	11	9	7	1	....	4	....	....	....
Other Tubercular Diseases	8	4	4	6	2	....	5	2	1	....	4	....	1	1	1	....	1	....	....	....	....	....
Cancer	11	4	7	....	9	2	1	....	10	....	....	....	....	....	....	1	1	5	3	1	....	....
Other General Diseases	11	5	6	8	3	....	5	5	1	3	1	2	2	....	....	....	2	....	1	....	....	....
GENERAL DISEASES	239	122	117	128	69	42	122	22	95	92	20	4	6	5	11	20	12	19	33	14	3	....
Meningitis	4	2	2	3	1	....	3	....	1	2	1	....	....	....	....	1	....	....	....	....	....	....
Apoplexy	21	12	9	1	8	12	1	3	17	....	....	....	....	....	2	2	1	4	8	4	....	....
Other Diseases of Brain & Membranes	6	3	3	3	2	1	4	....	2	3	....	....	....	....	....	1	1	....	1	....	....	....
Paralysis	1	....	1	....	1	....	....	....	1	....	....	....	....	....	....	1	....	....	....	....	....	....
Convulsions	10	5	5	10	....	....	10	....	....	9	1	....	....	....	....	....	....	....	....	....	....	....
Other Nervous Diseases	3	1	2	1	2	....	1	2	....	....	....	....	....	1	....	1	1	....	....	....	....	....

LOCAL DISEASES—Continued.																					
Organic Heart Diseases	14	8	6	3	7	4	4	1	9	....	....	....	3	....	1	2	....	4	2	1	1	....
Other Diseases of Circulatory System	5	2	3	1	1	3	....	1	4	....	....	....	....	....	....	....	1	....	3	1	....	....
Bronchitis	30	10	20	23	2	5	20	2	8	20	2	....	....	....	....	....	....	4	3	1	....	....
Pneumonia	42	24	18	27	11	4	25	4	13	16	9	2	....	....	3	2	1	4	4	1	....	....
Broncho-pneumonia	12	6	6	10	1	1	9	2	1	6	4	....	....	....	....	1	....	....	1	....	....	....
Asthma	2	2	....	1	....	1	....	1	1	....	....	....	....	....	....	1	....	....	1	....	....	....
Pleurisy	2	1	1	1	1	....	1	....	1	....	....	1	....	....	....	....	....	1	....	....	....	....
Other Respiratory Diseases	5	4	1	2	3	....	2	....	3	1	....	1	....	....	....	1	1	1	....	....	....	....
Gastritis	7	5	2	4	1	2	4	....	3	4	....	....	....	....	....	....	....	....	3	....	....	....
Diarrhœal Diseases	5	2	3	4	1	....	3	1	1	4	....	....	....	....	....	....	....	....	1	....	....	....
Appendicitis and Peritonitis	4	3	1	3	1	....	3	....	1	1	....	....	2	....	1	....	....	....	....	....	....	....
Hernia and Intestinal Obstruction	1	....	1	....	1	....	....	....	1	....	....	....	....	....	....	....	1	....	....	....	....	....
Cirrhosis of Liver	2	....	2	....	2	....	....	....	2	....	....	....	....	....	....	2	....	....	....	....	....	....
Other Digestive Diseases	5	4	1	3	2	....	3	....	2	2	1	....	....	....	....	1	1	....	....	....	....	....
Nephritis	14	10	4	4	8	2	4	....	10	1	2	....	....	1	....	3	3	1	2	1	....	....
Other Urinary Diseases	2	1	1	....	1	1	....	....	2	....	....	....	....	....	....	....	1	....	1	....	....	....
Diseases of Female Generative System	1	....	1	....	1	....	....	1	....	....	....	....	....	....	1	....	....	....	....	....	....	....
Puerperal Septicæmia	6	....	6	1	5	....	2	1	3	....	....	....	1	2	3	....	....	....	....	....	....	....
Other Diseases of Pregnancy	2	....	2	....	2	....	....	1	1	....	....	....	....	1	....	1	....	....	....	....	....	....
Diseases of Skin and Cellular Tissue	3	2	1	1	1	1	1	....	2	1	....	....	....	....	....	....	....	....	....	2	....	....
Locomotor System	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Malformations	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Congenital Debility	22	12	10	22	....	....	22	....	....	22	....	....	....	....	....	....	....	....	....	....	....	....
Senile Debility	8	3	5	....	3	5	....	2	6	....	....	....	....	....	....	....	....	....	3	3	2	....
VIOLENCE	10	8	2	5	4	1	2	2	6	....	1	....	2	1	3	2	1	....	....	....	....	....
Suicides	3	1	2	1	2	....	....	1	2	....	....	....	1	....	1	1	....	....	....	....	....	....
Accidents	7	7	....	4	2	1	2	1	4	....	1	....	1	1	2	1	1	....	....	....	....	....
Homicides	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Other Causes and Ill-defined	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

TABLE No. 4.

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of March, 1900.

The Annual Death Rate for the month was 13.45 on an estimated population of 285,000.

During the month there were 6 deaths more than for the corresponding month of 1899.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.												
		Male.	Female.	Single.	Married.	Widowed.	Milwaukee.	U. S. other than Milw.	Foreign.	Under 1 year.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
TOTAL—All Causes	325	145	180	173	89	63	158	55	112	106	34	6	6	25	16	30	20	32	30	17	3	....
GENERAL DISEASES	87	33	54	41	31	15	34	21	32	6	18	2	4	12	7	15	8	10	3	2	....	....
Typhoid Fever	2	1	1	1	1	....	1	1	....	....	....	....	1	1	....	....	....	....	....	....	....	....
Measles	2	....	2	2	....	....	2	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....
Scarlet Fever	12	5	7	12	....	....	11	1	....	....	9	2	1	....	....	....	....	....	....	....	....	....
Whooping Cough	2	....	2	2	....	....	2	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....
Diphtheria and Membranous Croup	7	3	4	7	....	....	7	....	....	....	6	....	1	....	....	....	....	....	....	....	....	....
Other Epidemic Diseases	3	....	3	....	2	1	....	....	3	....	....	....	....	....	....	....	....	2	....	1	....	....
Pulmonary Tuberculosis	26	13	13	8	14	4	3	13	10	1	....	....	1	9	6	4	2	2	1	....	....	....
Other Tubercular Diseases	7	2	5	6	....	1	5	1	1	....	3	....	....	2	....	2	....	....	....	....	....	....
Cancer	18	5	13	2	10	6	1	4	13	....	....	....	....	....	1	5	5	5	2	....	....	....
Other General Diseases	8	4	4	1	4	3	2	1	5	1	....	....	....	....	....	4	1	1	....	1	....	....
LOCAL DISEASES	229	105	124	130	54	45	122	32	75	100	16	4	2	10	9	11	11	22	26	15	3	....
Meningitis	10	4	6	8	1	1	8	....	2	3	4	....	....	2	....	....	1	....	....	....	....	....
Apoplexy	14	4	10	....	8	6	....	5	9	....	....	....	....	....	2	....	1	6	4	1	....	....
Other Diseases of Brain & Membranes	2	2	....	1	1	....	....	1	1	....	....	....	....	1	....	1	....	....	....	....	....	....
Paralysis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Convulsions	12	5	7	12	....	....	12	....	....	10	2	....	....	....	....	....	....	....	....	....	....	....
Other Nervous Diseases	1	....	1	1	....	....	1	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....

LOCAL DISEASES—Continued.																					
Organic Heart Diseases	25	8	17	7	11	7	7	6	12	2	1	1	2	1	2	4	2	4	4	1	1	....
Other Diseases of Circulatory System	2	1	1	....	1	1	....	....	2	....	....	....	....	....	....	....	....	1	....	....	1	....
Bronchitis	24	12	12	13	4	7	12	2	10	12	1	....	....	....	....	1	2	1	2	5	....	....
Pneumonia	28	12	16	16	7	5	14	5	9	12	1	2	....	....	1	2	....	5	3	2	....	....
Broncho-pneumonia	12	5	7	10	1	1	8	2	2	6	3	....	....	....	1	....	....	....	2	....	....	....
Asthma	2	1	1	....	1	1	....	....	2	....	....	....	....	....	....	....	....	....	2	....	....	....
Pleurisy	1	....	1	....	1	....	....	....	1	....	....	....	....	....	....	1	....	....	....	....	....	....
Other Respiratory Diseases	1	....	1	1	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
Gastritis	2	2	1	....	1	2	....	1	2	....	....	....	....	....	....	....	1	1	....	1	....	....
Diarrhœal Diseases	13	9	4	12	....	1	12	1	....	12	....	....	....	....	....	....	....	....	....	1	....	....
Appendicitis and Peritonitis	4	....	4	1	2	1	1	....	3	....	....	....	....	2	1	....	....	1	....	....	....	....
Hernia and Intestinal Obstruction	3	2	1	2	1	....	1	1	1	2	....	....	....	....	....	....	1	....	....	....	....	....
Cirrhosis of Liver	1	1	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	1	....	....	....
Other Digestive Diseases	8	3	5	6	2	....	5	1	2	6	....	....	....	....	1	....	1	....	....	....	....	....
Nephritis	10	10	....	4	4	2	3	2	5	....	3	1	....	....	....	....	2	1	2	1	....	....
Other Urinary Diseases	4	3	1	1	1	2	1	....	3	1	....	....	....	....	....	....	....	1	2	....	....	....
Diseases of Female Generative System	5	....	5	1	4	....	2	2	1	....	....	....	....	3	....	1	....	1	....	....	....	....
Puerperal Septicæmia	1	....	1	....	1	....	....	....	1	....	....	....	....	1	....	....	....	....	....	....	....	....
Other Diseases of Pregnancy	1	....	1	....	....	1	....	....	1	....	....	....	....	....	....	1	....	....	....	....	....	....
Diseases of Skin and Cellular Tissue	1	....	1	1	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....
Locomotor System	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Malformations	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Congenital Debility	33	16	17	33	....	....	33	....	....	33	....	....	....	....	....	....	....	....	....	....	....	....
Senile Debility	8	5	3	....	1	7	....	3	5	....	....	....	....	....	....	....	....	....	4	3	1	....
VIOLENCE	9	7	2	2	4	3	2	2	5	....	....	....	....	3	....	4	1	....	1	....	....	....
Suicides	4	3	1	1	2	1	1	2	1	....	....	....	....	2	....	2	....	....	....	....	....	....
Accidents	5	4	1	1	2	2	1	....	4	....	....	....	....	1	....	2	1	....	1	....	....	....
Homicides	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Other Causes and Ill-defined	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

TABLE No. 5.

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of April, 1900.

The Annual Death Rate for the month was 14.33 on an estimated population of 285,000.

During the month there were 17 deaths more than for the corresponding month of 1899.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.												
		Male.	Female.	Single.	Married.	Widowed.	Milwaukee.	U. S. Other than Mil.	Foreign.	Under 1 year.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	80 to 100.	Over 100.
TOTAL—All Causes	343	196	147	192	101	50	165	62	116	98	42	12	14	27	24	31	14	29	40	12	....	....
GENERAL DISEASES	82	48	34	43	29	10	37	20	25	9	15	1	5	16	6	10	6	7	7	....	....	....
Typhoid Fever	2	....	2	2	....	....	....	1	1	....	....	....	2	....	....	....	....	....	....	....	....	....
Measles	1	....	1	1	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....
Scarlet Fever	6	3	3	6	....	....	5	1	....	1	4	1	....	....	....	....	....	....	....	....	....	....
Whooping Cough	3	1	2	3	....	....	3	....	....	2	1	....	....	....	....	....	....	....	....	....	....	....
Diphtheria and Membranous Croup	8	5	3	7	....	1	6	2	....	1	5	....	1	....	1	....	....	....	....	....	....	....
Other Epidemic Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Pulmonary Tuberculosis	34	22	12	13	20	1	13	10	11	1	....	....	2	14	5	7	2	2	1	....	....	....
Other Tubercular Diseases	6	4	2	5	....	1	4	1	1	1	2	....	....	2	....	....	....	....	1	....	....	....
Cancer	14	8	6	....	8	6	1	3	10	....	....	....	....	....	....	3	3	4	4	....	....	....
Other General Diseases	8	5	3	6	1	1	4	2	2	2	3	....	....	....	....	....	1	1	1	....	....	....
LOCAL DISEASES	243	134	109	140	66	37	125	36	82	89	26	10	6	9	14	18	7	20	32	12	....	....
Meningitis	6	4	2	4	1	1	1	3	2	1	1	1	1	....	....	1	....	....	1	....	....	....
Apoplexy	6	4	2	1	2	3	....	3	3	....	....	....	....	....	1	....	....	2	1	2	....	....
Other Diseases of Brain & Membranes	4	4	....	2	2	....	1	1	2	1	....	....	....	1	....	....	1	....	1	....	....	....
Paralysis	2	1	1	....	1	1	....	2	....	....	....	....	....	....	....	....	....	1	....	1	....	....
Convulsions	16	8	8	16	....	....	15	1	....	15	1	....	....	....	....	....	....	....	....	....	....	....
Other Nervous Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

LOCAL DISEASES—Continued.																						
Organic Heart Diseases	20	13	7	6	11	3	6	3	11	1	1	2	1	....	1	3	1	4	4	2	....	....
Other Diseases of Circulatory System	3	1	2	....	....	3	....	....	3	....	....	....	....	....	....	....	....	1	2	....	....	....
Bronchitis	22	11	11	18	3	1	16	3	3	17	1	....	....	....	....	....	....	....	4	....	....	....
Pneumonia	54	31	23	30	16	8	24	9	21	9	12	2	2	4	3	7	1	5	8	1	....	....
Broncho-pneumonia	13	4	9	11	....	2	11	....	2	7	3	....	1	....	....	....	....	....	....	2	....	....
Asthma	3	3	....	....	....	3	....	....	3	....	....	....	....	....	....	....	....	1	2	....	....	....
Pleurisy	1	1	....	1	....	....	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
Other Respiratory Diseases	1	1	....	1	....	....	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
Gastritis	7	5	2	4	1	2	3	....	4	3	....	....	....	....	1	....	1	1	1	....	....	....
Diarrhœal Diseases	21	14	7	20	....	1	17	3	1	15	5	....	....	....	....	....	....	....	1	....	....	....
Appendicitis and Peritonitis	8	3	5	4	4	....	4	....	4	....	1	2	1	....	....	2	....	2	....	....	....	....
Hernia and Intestinal Obstruction	3	2	1	....	3	....	....	1	2	....	....	....	....	....	1	....	1	....	1	....	....	....
Cirrhosis of Liver	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Other Digestive Diseases	4	2	2	2	2	....	2	....	2	1	1	....	....	....	....	1	....	1	....	....	....	....
Nephritis	11	6	5	1	7	3	2	2	7	....	....	1	....	1	1	2	1	1	4	....	....	....
Other Urinary Diseases	3	1	2	....	2	1	1	....	2	....	....	....	....	....	1	1	....	1	....	....	....	....
Diseases of Female Generative System	1	....	1	....	1	....	....	1	....	....	....	....	....	....	....	1	....	....	....	....	....	....
Puerperal Septicæmia	6	....	6	....	6	....	....	2	4	....	....	....	....	2	4	....	....	....	....	....	....	....
Other Diseases of Pregnancy	2	....	2	....	2	....	1	1	....	....	....	....	....	1	1	....	....	....	....	....	....	....
Diseases of Skin and Cellular Tissue	1	1	....	....	1	....	....	....	1	....	....	....	....	....	....	....	1	....	....	....	....	....	....
Locomotor System	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Malformations	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Congenital Debility	19	11	8	19	....	....	19	....	....	19	....	....	....	....	....	....	....	....	....	....	....	....
Senile Debility	6	3	3	....	1	5	....	1	5	....	....	....	....	....	....	....	....	....	2	4	....	....
VIOLENCE	18	14	4	9	6	3	3	6	9	....	1	1	3	2	4	3	1	2	1	....	....	....
Suicides	7	5	2	1	4	2	....	2	5	....	....	....	....	1	1	2	1	2	....	....	....	....
Accidents	11	9	2	8	2	1	3	4	4	....	1	1	3	1	3	1	....	....	1	....	....	....
Homicides	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Other Causes and Ill-defined	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

TABLE No. 6.

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of May, 1900.

The Annual Death Rate for the month was 15.44 on an estimated population of 285,000.

During the month there were 64 deaths more than for the corresponding month of 1899.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.												
		Male	Female.	Single.	Married.	Widowed.	Milwaukee.	U. S. other than Mil.	Foreign.	Under 1 year.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 80.	90 to 100.	Over 100.
TOTAL—All Causes	373	190	183	209	104	60	188	54	131	110	39	9	21	23	29	22	35	26	35	18	6	....
GENERAL DISEASES	109	51	58	59	37	13	53	22	34	12	15	4	9	15	14	11	15	8	5	1	....	....
Typhoid Fever	3	3	....	3	....	....	2	1	....	....	....	....	2	1	....	....	....	....	....	....	....	....
Measles	1	1	....	1	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
Scarlet Fever	5	1	4	5	....	....	4	1	....	....	4	1	....	....	....	....	....	....	....	....	....	....
Whooping Cough	6	1	5	6	....	....	6	....	....	3	3	....	....	....	....	....	....	....	....	....	....	....
Diphtheria and Membranous Croup	10	6	4	10	....	....	10	....	....	2	4	3	1	....	....	....	....	....	....	....	....	....
Other Epidemic Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Pulmonary Tuberculosis	38	20	18	19	16	3	17	9	12	....	1	....	4	10	12	5	3	3	....	....	....	....
Other Tubercular Diseases	14	4	10	10	2	2	9	3	2	5	2	....	1	3	1	1	1	....	....	....	....	....
Cancer	19	9	10	1	13	5	1	2	16	....	....	....	....	....	1	2	8	3	4	1	....	....
Other General Diseases	13	6	7	4	6	3	3	6	4	2	....	....	1	1	....	3	3	2	1	....	....	....
LOCAL DISEASES	248	127	121	143	59	46	130	29	89	98	22	5	8	8	11	10	18	17	28	17	6	....
Meningitis	4	2	2	4	....	....	3	1	....	2	2	....	....	....	....	....	....	....	....	....	....	....
Apoplexy	12	2	10	1	4	7	....	....	12	....	....	....	....	....	1	....	....	1	4	5	1	....
Other Diseases of Brain & Membranes	3	2	1	2	1	....	2	....	1	1	....	....	....	1	....	....	1	....	....	....	....	....
Paralysis	1	1	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	1	....	....	....
Convulsions	8	3	5	8	....	....	8	....	....	8	....	....	....	....	....	....	....	....	....	....	....	....
Other Nervous Diseases	3	....	3	....	1	2	....	1	2	....	....	....	....	....	....	....	....	2	....	....	1	....

LOCAL DISEASES—Continued.																						
Organic Heart Diseases	22	13	9	3	15	4	.....	4	18	....	....	....	1	....	....	4	4	4	7	2	....	....
Other Diseases of Circulatory System	5	4	1	1	2	2	.....	1	4	....	....	....	1	....	....	....	....	....	2	2	....	....
Bronchitis	14	9	5	11	1	2	9	3	2	10	1	....	....	....	....	....	....	....	1	2	....	....
Pneumonia	39	20	19	22	11	6	18	7	14	9	7	2	2	1	3	1	3	5	4	1	1	....
Broncho-pneumonia	8	5	3	7	.....	1	7	.....	1	5	2	....	....	....	....	....	....	....	1	....	....	....
Asthma	3	2	1	.....	1	2	.....	.....	3	....	....	....	....	....	....	....	1	1	1	....	....	....
Pleurisy	2	1	1	1	1	.....	2	.....	.....	....	1	....	....	....	....	1	....	....	....	....	....	....
Other Respiratory Diseases	5	4	1	2	2	1	2	1	2	2	....	....	....	....	1	....	2	....	....	....	....	....
Gastritis	6	5	1	5	.....	1	5	.....	1	4	....	....	1	....	1	....	....	....	....	....	....	....
Diarrhœal Diseases	22	13	9	20	2	.....	19	2	1	19	1	....	....	....	....	....	....	1	1	....	....	....
Appendicitis and Peritonitis	8	4	4	6	2	.....	4	2	2	....	1	2	3	1	1	....	....	....	....	....	....	....
Hernia and Intestinal Obstruction	1	1	.....	.....	1	.....	1	.....	.....	....	....	....	....	....	1	....	....	....	....	....	....	....
Cirrhosis of Liver	1	.....	1	1	.....	.....	.....	1	.....	....	....	....	....	....	....	....	1	....	....	....	....	....
Other Digestive Diseases	9	5	4	7	.....	2	7	1	1	3	3	....	....	1	....	....	1	....	1	....	....	....
Nephritis	14	8	6	6	5	3	7	1	6	1	3	1	....	1	....	2	3	1	2	....	....	....
Other Urinary Diseases	2	1	1	.....	.....	2	.....	.....	2	....	....	....	....	....	....	....	1	....	1	....	....	....
Diseases of Female Generative System	3	.....	3	.....	2	1	.....	.....	3	....	....	....	....	....	2	1	....	....	....	....	....	....
Puerperal Septicæmia	3	.....	3	1	2	.....	1	1	1	....	....	....	....	3	....	....	....	....	....	....	....	....
Other Diseases of Pregnancy	2	.....	2	.....	2	.....	1	.....	1	....	....	....	....	....	1	1	....	....	....	....	....	....
Diseases of Skin and Cellular Tissue	3	1	2	1	1	1	1	1	1	....	1	....	....	....	....	....	1	1	....	....	....	....
Locomotor System	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	....	....	....	....	....	....	....	....	....	....	....	....
Malformations	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	....	....	....	....	....	....	....	....	....	....	....	....
Congenital Debility	34	17	17	34	.....	.....	33	1	.....	34	....	....	....	....	....	....	....	....	....	....	....	....
Senile Debility	11	4	7	.....	2	9	.....	1	10	....	....	....	....	....	....	....	....	1	2	5	3	....
VIOLENCE	16	12	4	7	8	1	5	3	8	....	2	....	4	....	4	1	2	1	2	....	....	....
Suicides	5	4	1	.....	5	.....	.....	2	3	....	....	....	....	....	2	1	1	1	....	....	....	....
Accidents	11	8	3	7	3	1	5	1	5	....	2	....	4	....	2	....	1	....	2	....	....	....
Homicides	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	....	....	....	....	....	....	....	....	....	....	....	....
Other Causes and Ill-defined	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	....	....	....	....	....	....	....	....	....	....	....	....

TABLE No. 7.

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of June, 1900.

The Annual Death Rate for the month was 11.90 on an estimated population of 285,000.

During the month there were 16 deaths more than for the corresponding month of 1899.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.												
		Male.	Female.	Single.	Married.	Widowed.	Milwaukee.	U. S. other than Mil.	Foreign.	Under 1 year.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
TOTAL—All Causes	278	150	128	157	88	33	138	35	105	69	38	17	12	25	22	24	18	17	29	6	1	....
GENERAL DISEASES	95	44	51	51	35	9	51	11	33	9	13	9	9	16	10	14	7	2	5	1	....	....
Typhoid Fever	6	3	3	5	....	1	2	3	1	....	1	....	1	3	1	....	....	....	....	....	....	....
Measles	7	2	5	7	....	....	7	....	....	2	4	1	....	....	....	....	....	....	....	....	....	....
Scarlet Fever	9	6	3	9	....	....	9	....	....	....	5	3	1	....	....	....	....	....	....	....	....	....
Whooping Cough	1	....	1	1	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....
Diphtheria and Membranous Croup	5	4	1	5	....	....	5	....	....	....	1	4	....	....	....	....	....	....	....	....	....	....
Other Epidemic Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Pulmonary Tuberculosis	34	19	15	12	18	4	16	2	16	2	....	....	4	10	7	5	3	1	2	....	....	....
Other Tubercular Diseases	10	2	8	7	2	1	6	4	....	3	1	1	1	2	1	1	....	....	....	....	....	....
Cancer	13	4	9	....	12	1	....	2	11	....	....	....	....	....	1	5	4	....	3	....	....	....
Other General Diseases	10	4	6	5	3	2	5	....	5	1	1	....	2	1	....	3	....	1	....	1	....	....
LOCAL DISEASES	166	91	75	97	47	22	85	19	62	60	25	6	1	7	9	8	9	12	24	4	1	....
Meningitis	9	6	3	7	1	1	8	....	1	1	5	1	....	1	....	....	....	1	....	....	....	....
Apoplexy	11	5	6	....	6	5	....	....	11	....	....	....	....	....	1	1	2	1	6	....	....	....
Other Diseases of Brain & Membranes	5	2	3	....	5	....	....	1	4	....	....	....	....	....	2	1	1	....	1	....	....	....
Paralysis	1	....	1	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	1	....	....	....
Convulsions	5	1	4	5	....	....	5	....	....	4	1	....	....	....	....	....	....	....	....	....	....	....
Other Nervous Diseases	1	1	....	1	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....

LOCAL DISEASES—Continued.																						
Organic Heart Diseases	11	5	6	3	4	4	2	3	6	1	1	....	1	1	....	....	2	2	2	1	....	....
Other Diseases of Circulatory System	3	1	2	....	2	1	....	....	3	....	....	....	....	....	....	1	....	1	1	....	....	....
Bronchitis	10	6	4	6	3	1	4	....	6	4	1	....	....	....	....	....	....	1	4	....	....	....
Pneumonia	21	12	9	15	6	....	13	3	5	6	7	2	....	....	1	1	....	2	2	....	....	....
Broncho-pneumonia	4	2	2	3	....	1	2	....	2	....	2	1	....	....	....	....	....	....	1	....	....	....
Asthma	2	....	2	....	1	1	....	....	2	....	....	....	....	....	....	....	....	1	1	....	....	....
Pleurisy	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Other Respiratory Diseases	3	2	1	2	1	....	2	1	....	....	1	....	....	1	....	1	....	....	....	....	....	....
Gastritis	3	2	1	3	....	....	3	....	....	3	....	....	....	....	....	....	....	....	....	....	....	....
Diarrhœal Diseases	18	10	8	18	....	....	15	2	1	13	5	....	....	....	....	....	....	....	....	....	....	....
Appendicitis and Peritonitis	4	2	2	2	2	....	2	2	....	....	....	1	....	3	....	....	....	....	....	....	....	....
Hernia and Intestinal Obstruction	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Cirrhosis of Liver	1	....	1	....	....	1	....	1	....	....	....	....	....	....	....	....	1	....	....	....	....	....
Other Digestive Diseases	9	5	4	6	2	1	4	3	2	4	1	....	....	1	1	....	....	....	1	1	....	....
Nephritis	8	5	3	2	4	2	1	1	6	....	....	1	....	....	....	1	2	2	1	1	....	....
Other Urinary Diseases	2	2	....	1	....	1	1	....	1	1	....	....	....	....	....	....	....	1	....	....	....	....
Diseases of Female Generative System	1	....	1	....	1	....	....	....	1	....	....	....	....	....	....	....	1	....	....	....	....	....
Puerperal Septicæmia	3	....	3	....	3	....	....	....	3	....	....	....	....	....	2	1	....	....	....	....	....	....
Other Diseases of Pregnancy	3	....	3	....	3	....	....	....	3	....	....	....	....	....	2	1	....	....	....	....	....	....
Diseases of Skin and Cellular Tissue	3	3	....	2	....	1	2	....	1	2	....	....	....	....	....	....	....	....	....	1	....	....
Locomotor System	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Malformations	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Congenital Debility	21	15	6	21	....	....	20	1	....	21	....	....	....	....	....	....	....	....	....	....	....	....
Senile Debility	4	4	....	....	3	1	....	1	3	....	....	....	....	....	....	....	....	....	3	....	1	....
VIOLENCE	17	15	2	9	6	2	2	5	10	....	....	2	2	2	3	2	2	3	....	1	....	....
Suicides	6	6	....	3	2	1	....	2	4	....	....	....	....	1	1	2	....	1	....	1	....	....
Accidents	10	8	2	5	4	1	2	2	6	....	....	2	2	1	1	....	2	2	....	....	....	....
Homicides	1	1	....	1	....	....	....	1	....	....	....	....	....	....	1	....	....	....	....	....	....	....
Other Causes and Ill-defined	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

TABLE No. 8.

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of July, 1900.

The Annual Death Rate for the month was 13.44 on an estimated population of 285,315.

During the month there were 21 deaths less than for the corresponding month of 1899.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.												
		Male.	Female.	Single.	Married.	Widowed.	Milwaukee.	U. S. other than Mil.	Foreign.	Under 1 year.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
TOTAL—All Causes	325	175	150	206	80	39	187	33	105	126	33	9	15	21	27	21	9	23	29	10	2	....
GENERAL DISEASES	79	32	47	35	32	12	25	15	39	1	14	4	6	11	14	9	1	7	10	2	....	....
Typhoid Fever	3	1	2	3	....	....	1	1	1	....	....	....	2	1	....	....	....	....	....	....	....	....
Measles	2	....	2	2	....	....	2	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....
Scarlet Fever	6	2	4	6	....	....	5	1	....	....	4	2	....	....	....	....	....	....	....	....	....	....
Whooping Cough	1	1	....	1	....	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....
Diphtheria and Membranous Croup	4	2	2	4	....	....	4	....	....	....	3	1	....	....	....	....	....	....	....	....	....	....
Other Epidemic Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Pulmonary Tuberculosis	31	14	17	11	18	2	7	7	17	....	....	....	3	9	11	4	....	1	3	....	....	....
Other Tubercular Diseases	6	3	3	4	2	....	4	1	1	1	3	....	....	1	....	....	....	....	1	....	....	....
Cancer	19	7	12	2	10	7	1	2	16	....	1	....	1	....	1	4	1	5	5	1	....	....
Other General Diseases	7	2	5	2	2	3	1	2	4	....	....	1	....	....	2	1	....	1	1	1	....	....
LOCAL DISEASES	215	117	98	156	36	23	153	13	49	124	17	3	6	5	8	5	6	15	17	7	2	....
Meningitis	8	5	3	7	1	....	7	1	....	2	2	2	1	1	....	....	....	....	....	....	....	....
Apoplexy	8	6	2	....	6	2	1	1	6	....	....	....	....	....	1	1	1	3	2	....	....	....
Other Diseases of Brain & Membranes	3	3	....	....	1	2	....	....	3	....	....	....	....	....	....	....	....	1	1	....	1	....
Paralysis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Convulsions	6	4	2	6	....	....	6	....	....	4	2	....	....	....	....	....	....	....	....	....	....	....
Other Nervous Diseases	2	2	....	2	....	....	2	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....

LOCAL DISEASES—Continued.																					
Organic Heart Disease	19	8	11	3	7	9	3	4	12	....	....	....	2	....	....	3	2	4	7	1	....	....
Other Diseases of Circulatory System	2	1	1	....	1	1	....	....	2	....	....	....	....	....	....	....	....	....	2	....	....	....
Bronchitis	5	2	3	2	2	1	2	....	3	2	....	....	....	....	....	....	....	....	1	1	1	....
Pneumonia	8	3	5	6	1	1	6	1	1	2	3	....	....	1	1	....	....	....	....	1	....	....
Broncho-pneumonia	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Asthma	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Pleurisy	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Other Respiratory Diseases	2	1	1	2	....	....	1	1	....	....	1	....	....	1	....	....	....	....	....	....	....	....
Gastritis	3	2	1	3	....	....	3	....	....	3	....	....	....	....	....	....	....	....	....	....	....	....
Diarrhœal Diseases	79	42	37	77	2	....	76	1	2	68	9	....	....	1	....	....	1	....	....	....	....	....
Appenditicis and Peritonitis	4	3	1	4	....	....	1	1	2	....	....	....	1	1	2	....	....	....	....	....	....	....
Hernia and Intestinal Obstruction	4	1	3	....	3	1	....	1	3	....	....	....	....	....	2	....	1	....	1	....	....	....
Cirrhosis of Liver	1	1	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....	1	....	....	....	....
Other Digestive Diseases	5	3	2	3	2	....	3	....	2	3	....	....	....	....	....	....	....	2	....	....	....	....
Nephritis	5	3	2	2	2	1	2	1	2	....	....	1	1	....	....	....	1	1	1	....	....	....
Other Urinary Diseases	3	2	1	....	2	1	1	....	2	....	....	....	....	....	....	1	....	1	1	....	....	....
Diseases of Female Generative System	1	....	1	....	1	....	....	....	1	....	....	....	....	....	1	....	....	....	....	....	....	....
Puerperal Septicæmia	1	....	1	....	1	....	....	....	1	....	....	....	....	....	1	....	....	....	....	....	....	....
Other Diseases of Pregnancy	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Diseases of Skin and Cellular Tissue	5	....	5	3	1	1	3	....	2	3	....	....	....	....	....	....	....	2	....	....	....	....
Locomotor System	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Malformations	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Congenital Debility	36	21	15	36	....	....	36	....	....	36	....	....	....	....	....	....	....	....	....	....	....	....
Senile Debility	5	4	1	....	2	3	....	1	4	....	....	....	....	....	....	....	....	....	1	4	....	....
VIOLENCE	31	26	5	15	12	4	9	5	17	1	2	2	3	5	5	7	2	1	2	1	....	....
Suicides	6	4	2	2	3	1	....	2	4	....	....	....	....	2	1	2	....	....	1	....	....	....
Accidents	25	22	3	13	9	3	9	3	13	1	2	2	3	3	4	5	2	1	1	1	....	....
Homicides	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Other Causes and Ill-defined	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

TABLE No. 9.

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of August, 1900.

The Annual Death Rate for the month was 18.24 on an estimated population of 285,315.

During the month there were 103 deaths more than for the corresponding month of 1899.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.												
		Male.	Female.	Single.	Married.	Widowed.	Milwaukee.	U. S. other than Mil.	Foreign.	Under 1 year.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
TOTAL—All Causes	441	245	196	299	100	42	271	61	109	193	49	10	19	26	28	36	25	20	30	5	....	....
GENERAL DISEASES	102	53	49	48	42	12	43	20	39	9	11	5	6	16	12	14	13	7	7	2	....	....
Typhoid Fever	6	5	1	2	4	....	2	1	3	....	....	....	1	2	1	....	....	1	1	....	....	....
Measles	2	1	1	2	....	....	2	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....
Scarlet Fever	1	1	....	1	....	....	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
Whooping Cough	5	3	2	5	....	....	5	....	....	3	2	....	....	....	....	....	....	....	....	....	....	....
Diphtheria and Membranous Croup	8	7	1	8	....	....	7	1	....	....	5	3	....	....	....	....	....	....	....	....	....	....
Other Epidemic Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Pulmonary Tuberculosis	29	14	15	13	15	1	11	9	9	1	....	1	3	11	6	6	....	....	1	....	....	....
Other Tubercular Diseases	11	5	6	5	4	2	5	4	2	3	1	....	....	1	3	1	2	....	....	....	....	....
Cancer	25	10	15	4	15	6	2	3	20	....	....	....	....	....	2	5	10	4	3	1	....	....
Other General Diseases	15	7	8	8	4	3	8	2	5	2	1	....	2	2	....	2	1	2	2	1	....	....
LOCAL DISEASES	310	169	141	238	46	26	213	38	59	182	38	3	6	7	11	16	11	11	22	3	....	....
Meningitis	5	1	4	4	....	1	3	....	2	....	4	....	....	....	....	....	....	1	....	....	....	....
Apoplexy	13	10	3	1	10	2	....	3	10	....	....	....	....	....	....	1	1	4	7	....	....	....
Other Diseases of Brain & Membranes	4	1	3	3	1	....	3	....	1	1	1	1	....	....	....	....	1	....	....	....	....	....
Paralysis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Convulsions	16	9	7	16	....	....	16	....	....	13	3	....	....	....	....	....	....	....	....	....	....	....
Other Nervous Diseases	4	4	....	....	2	2	....	2	2	....	....	....	....	....	....	1	....	....	3	....	....	....

LOCAL DISEASES—Continued.																						
Organic Heart Diseases	17	7	10	5	6	6	2	6	9	....	....	....	2	....	2	5	4	....	4	....	....	....
Other Diseases of Circulatory System	2	1	1	....	....	2	....	1	1	....	....	....	....	....	....	....	....	1	1	....	....	....
Bronchitis	5	4	1	5	....	....	4	....	1	4	....	....	....	....	....	....	....	....	1	....	....	....
Pneumonia	10	7	3	7	2	1	7	1	2	2	5	....	....	....	1	1	....	....	....	1	....	....
Broncho-pneumonia	2	2	....	2	....	....	2	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....
Asthma	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Pleurisy	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Other Respiratory Diseases	4	2	2	2	2	....	2	1	1	1	1	....	....	....	....	1	....	....	1	....	....	....
Gastritis	3	3	....	2	....	1	2	....	1	1	1	....	....	....	....	....	....	....	....	1	....	....
Diarrhœal Diseases	161	90	71	153	2	6	137	15	9	130	22	....	1	....	....	....	2	3	3	....	....	....
Appendicitis and Peritonitis	4	3	1	1	3	....	1	....	3	....	....	....	....	3	....	1	....	....	....	....	....	....
Hernia and Intestinal Obstruction	2	1	1	1	1	....	1	1	....	....	....	....	1	....	1	....	....	....	....	....	....	....
Cirrhosis of Liver	1	1	....	....	1	....	....	1	....	....	....	....	....	....	....	1	....	....	....	....	....	....
Other Digestive Diseases	6	....	6	3	2	1	2	2	2	3	....	....	....	....	1	....	2	....	....	....	....	....
Nephritis	9	5	4	3	4	2	1	2	6	....	....	1	1	....	2	3	....	1	....	1	....	....
Other Urinary Diseases	3	3	....	1	2	....	1	....	2	....	....	1	....	....	....	....	1	....	1	....	....	....
Diseases of Female Generative System	5	....	5	2	3	....	2	....	3	....	....	....	....	2	2	1	....	....	....	....	....	....
Puerperal Septicæmia	4	....	4	....	4	....	....	2	2	....	....	....	....	2	2	....	....	....	....	....	....	....
Other Diseases of Pregnancy	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Diseases of Skin and Cellular Tissue	2	1	1	2	....	....	2	....	....	....	1	....	1	....	....	....	....	....	....	....	....	....
Locomotor System	1	....	1	....	1	....	....	1	....	....	....	....	....	....	....	1	....	....	....	....	....	....
Malformations	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Congenital Debility	25	14	11	25	....	....	25	....	....	25	....	....	....	....	....	....	....	....	....	....	....	....
Senile Debility	2	....	2	....	....	2	....	....	2	....	....	....	....	....	....	....	....	1	1	....	....	....
VIOLENCE	29	23	6	13	12	4	15	3	11	2	....	2	7	3	5	6	1	2	1	....	....	....
Suicides	2	1	1	....	2	....	....	1	1	....	....	....	....	1	....	....	1	....	....	....	....	....
Accidents	27	22	5	13	10	4	15	2	10	2	....	2	7	2	5	6	....	2	1	....	....	....
Homicides	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Other Causes and Ill-defined	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

TABLE No. 10.

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of September, 1900.

The Annual Death Rate for the month was 15.23 on an estimated population of 290,000.

During the month there were 100 deaths more than for the corresponding month of 1899.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity			AGE.												
		Male.	Female.	Single.	Married.	Widow.	Milwaukee.	U. S. other than Mil.	Foreign.	Under 1 year.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
TOTAL—All Causes	362	193	169	220	99	43	210	44	108	125	47	10	18	23	24	29	26	18	23	18	1	....
GENERAL DISEASES	98	46	52	52	38	8	49	21	28	10	12	7	12	14	12	10	12	4	4	1	....	....
Typhoid Fever	11	7	4	6	5	....	7	2	2	....	1	....	4	1	2	1	1	1	....	....	....	....
Measles	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Scarlet Fever	2	....	2	2	....	....	1	1	....	....	2	....	....	....	....	....	....	....	....	....	....	....
Whooping Cough	6	1	5	6	....	....	5	1	....	4	2	....	....	....	....	....	....	....	....	....	....	....
Diphtheria and Membranous Croup	10	4	6	10	....	....	8	2	....	....	4	2	4	....	....	....	....	....	....	....	....	....
Other Epidemic Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Pulmonary Tuberculosis	36	17	19	16	18	2	16	9	11	2	....	1	4	12	8	5	3	....	1	....	....	....
Other Tubercular Diseases	9	5	4	8	1	....	8	1	....	3	2	3	....	....	....	....	....	1	....	....	....	....
Cancer	14	5	9	....	9	5	1	2	11	....	....	....	....	....	2	1	5	2	3	1	....	....
Other General Diseases	10	7	3	4	5	1	3	3	4	1	1	1	....	1	....	3	3	....	....	....	....	....
LOCAL DISEASES	245	129	116	162	48	35	154	21	70	115	34	2	5	5	9	13	11	14	19	17	1	....
Meningitis	8	3	5	8	....	....	8	....	....	2	4	1	1	....	....	....	....	....	....	....	....	....
Apoplexy	4	2	2	....	2	2	....	2	2	....	....	....	....	....	....	2	....	....	1	1	....	....
Other Diseases of Brain & Membranes	3	1	2	1	....	2	....	1	2	....	....	....	....	1	....	....	....	1	1	....	....	....
Paralysis	5	2	3	1	3	1	1	1	3	....	....	....	....	....	1	2	1	....	....	....	1	....
Convulsions	11	5	6	11	....	....	11	....	....	9	2	....	....	....	....	....	....	....	....	....	....	....
Other Nervous Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

LOCAL DISEASES—Continued.																						
Organic Heart Diseases	26	12	14	4	14	8	2	3	21	2	....	....	....	....	3	1	5	4	5	6	....	....
Other Diseases of Circulatory System	3	2	1	....	2	1	....	....	3	....	....	....	....	....	....	....	2	1	....	....	....	....
Bronchitis	8	3	5	7	....	1	7	....	1	5	2	....	....	....	....	....	....	....	1	....	....	....
Pneumonia	10	5	5	6	3	1	6	1	3	5	....	....	....	....	1	2	1	1	....	....	....	....
Broncho-pneumonia	5	3	2	5	....	....	5	....	....	4	1	....	....	....	....	....	....	....	....	....	....	....
Asthma	3	1	2	....	1	2	....	....	3	....	....	....	....	....	....	1	....	1	1	....	....	....
Pleurisy	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Other Respiratory Diseases	1	1	....	1	....	....	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
Gastritis	5	3	2	4	1	....	4	....	1	1	3	....	....	....	....	....	....	1	....	....	....	....
Diarrhœal Diseases	71	43	28	67	2	2	61	6	4	47	20	....	....	....	....	....	1	....	1	2	....	....
Appendicitis and Peritonitis	6	3	3	3	3	....	2	2	2	1	....	....	1	1	....	2	....	1	....	....	....	....
Hernia and Intestinal Obstruction	4	3	1	....	2	....	....	....	4	....	....	....	....	....	....	....	....	1	3	....	....	....
Cirrhosis of Liver	1	1	....	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	1	....	....	....
Other Digestive Diseases	8	3	5	5	1	2	6	....	2	4	1	....	....	1	....	....	....	1	....	1	....	....
Nephritis	12	5	7	4	6	2	3	3	6	1	1	....	2	....	1	2	1	1	3	....	....	....
Other Urinary Diseases	3	2	1	....	1	2	1	....	2	....	....	....	....	....	1	....	....	1	....	1	....	....
Diseases of Female Generative System	1	....	1	....	1	....	1	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....
Puerperal Septicæmia	2	....	2	....	2	....	....	1	1	....	....	....	....	1	1	....	....	....	....	....	....	....
Other Diseases of Pregnancy	2	....	2	....	2	....	....	....	2	....	....	....	....	1	....	1	....	....	....	....	....	....
Diseases of Skin and Cellular Tissue	2	1	1	2	....	....	2	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....
Locomotor System	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Malformations	2	2	....	2	....	....	2	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....
Congenital Debility	31	18	13	31	....	....	31	....	....	31	....	....	....	....	....	....	....	....	....	....	....	....
Senile Debility	8	5	3	....	2	6	....	1	7	....	....	....	....	....	....	....	....	....	2	6	....	....
VIOLENCE	19	18	1	6	13	....	7	2	10	....	1	1	1	4	3	6	3	....	....	....	....	....
Suicides	9	8	1	1	8	....	1	1	7	....	....	....	....	1	2	4	2	....	....	....	....	....
Accidents	9	9	....	4	5	....	5	1	3	....	1	1	1	2	1	2	1	....	....	....	....	....
Homicides	1	1	....	1	....	....	1	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....
Other Causes and Ill-defined	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

TABLE No. 11.

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of October, 1900.

The Annual Death Rate for the month was 11.80 on an estimated population of 290,000.

During the month there were 12 deaths less than for the corresponding month of 1899.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.												
		Male.	Female.	Single.	Married.	Widowed.	Milwaukee.	U. S. other than Mil.	Foreign.	Under 1 year.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
TOTAL—All Causes	290	141	149	145	97	48	137	47	106	71	29	8	15	20	25	28	23	26	24	18	3	....
GENERAL DISEASES	84	37	47	39	33	12	36	15	33	6	11	8	7	10	7	11	8	10	3	3	....	....
Typhoid Fever	11	6	5	4	4	3	5	4	2	....	....	....	3	4	....	2	2	....	....	....	....	....
Measles	1	....	1	1	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....
Scarlet Fever	1	1	....	1	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
Whooping Cough	4	1	3	4	....	....	3	1	....	2	2	....	....	....	....	....	....	....	....	....	....	....
Diphtheria and Membranous Croup	17	11	6	17	....	....	16	....	1	....	7	7	3	....	....	....	....	....	....	....	....	....
Other Epidemic Diseases	1	1	....	1	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....
Pulmonary Tuberculosis	18	6	12	7	11	....	5	6	7	....	1	....	1	6	4	3	2	....	1	....	....	....
Other Tubercular Diseases	6	4	2	2	4	....	1	....	5	....	....	1	....	....	....	2	....	1	1	1	....	....
Cancer	17	3	14	....	10	7	1	4	12	....	....	....	....	....	2	4	3	6	1	1	....	....
Other General Diseases	8	4	4	2	4	2	2	....	6	2	....	....	....	....	1	....	1	3	....	1	....	....
LOCAL DISEASES	188	87	101	98	55	35	96	26	66	65	16	....	4	10	13	14	13	14	21	15	3	....
Meningitis	8	4	4	6	2	....	6	....	2	2	3	....	1	....	1	....	....	1	....	....	....	....
Apoplexy	18	7	11	2	9	7	1	4	13	....	....	....	....	....	2	1	2	....	10	3	....	....
Other Diseases of Brain & Membranes	4	3	1	2	2	....	2	1	1	1	1	....	....	....	....	1	1	....	....	....	....	....
Paralysis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Convulsions	10	4	6	10	....	....	9	1	....	6	4	....	....	....	....	....	....	....	....	....	....	....
Other Nervous Diseases	3	1	2	....	2	1	....	1	2	....	....	....	....	....	....	1	1	....	1	....	....	....

LOCAL DISEASES—Continued.																					
Organic Heart Diseases	20	12	8	5	3	2	3	5	12	1				2	4	3	1	3	4	2	
Other Diseases of Circulatory System	4	4			3	1		3	1								1	1	1	1	
Bronchitis	7	3	4	3	1	3	4		3	3				1		1		1		1	
Pneumonia	9	2	7	4	2	3	4	1	4	4						2				3	
Broncho-pneumonia	1		1	1					1	1											
Asthma																					
Pleurisy																					
Other Respiratory Diseases	5	2	3	2	3		2		3	1				1	1			2			
Gastritis	3	1	2	2		1	2		1	1	1						1				
Diarrhœal Diseases	16	9	7	15		1	15		1	10	4		1				1				
Appendicitis and Peritonitis	6	4	2	3	3		4	1	1	1			1	2	1	1					
Hernia and Intestinal Obstruction	4	2	2	3		1	3		1	1	2							1			
Cirrhosis of Liver	6	3	3	1	4	1	1	2	3						1	3	1		1		
Other Digestive Diseases	8	3	5	4	3	1	2	3	3	2				2			1	2	1		
Nephritis	9	4	5	4	3	2	5	1	3	1			1	1	1	1	3	1			
Other Urinary Diseases	1	1				1			1											1	
Diseases of Female Generative System																					
Puerperal Septicæmia	2		2		2		1	1						1	1						
Other Diseases of Pregnancy	1		1		1		1								1						
Diseases of Skin and Cellular Tissue	6	3	3	2	2	2	2		4	1	1							2	1		1
Locomotor System																					
Malformations																					
Congenital Debility	29	13	16	29			29			29											
Senile Debility	8	2	6			8		2	6										2	4	2
VIOLENCE	18	17	1	8	9	1	5	6	7		2		4	1	4	3	2	2			
Suicides	4	4			3	1		1	3						1	1	1	1			
Accidents	14	13	1	8	6		5	5	4		2		4	1	3	2	1	1			
Homicides																					
Other Causes and Ill-defined																					

TABLE No. 12.

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of November, 1900.

The Annual Death Rate for the month was 11.86 on an estimated population of 290,000.

During the month there were 5 deaths less than for the corresponding month of 1899.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.												
		Male.	Female.	Single.	Married.	Widowed.	Milwaukee.	U. S other than Mil.	Foreign.	Under 1 year.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
TOTAL—All Causes	282	154	128	162	73	47	143	32	107	76	32	16	10	22	20	18	17	34	25	10	2	....
GENERAL DISEASES	90	44	46	54	30	....	43	14	33	5	14	9	8	14	14	9	6	4	6	....	1	....
Typhoid Fever	7	4	3	4	3	....	3	1	3	....	....	....	2	2	2	....	1	....	....	....	....	....
Measles	2	1	1	2	....	....	2	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....
Scarlet Fever	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Whooping Cough	2	1	1	2	....	....	1	1	....	1	1	....	....	....	....	....	....	....	....	....	....	....
Diphtheria and Membranous Croup	14	7	7	14	....	....	14	....	....	....	6	7	1	....	....	....	....	....	....	....	....	....
Other Epidemic Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Pulmonary Tuberculosis	33	16	17	18	14	1	13	8	12	....	1	2	4	12	7	4	1	2	....	....	....	....
Other Tubercular Diseases	9	7	2	9	....	....	6	1	2	3	4	....	....	....	1	1	....	....	....	....	....	....
Cancer	13	4	9	1	8	4	1	2	10	....	....	....	....	....	1	3	3	2	3	....	1	....
Other General Diseases	10	4	6	4	5	1	3	1	6	1	....	....	1	....	3	1	1	....	3	....	....	....
LOCAL DISEASES	178	96	82	105	33	40	96	16	66	71	17	6	2	6	4	7	7	28	19	10	1	....
Meningitis	2	2	....	2	....	....	2	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....
Apoplexy	13	2	11	....	6	7	....	2	11	....	....	....	....	....	....	3	....	4	5	1	....	....
Other Diseases of Brain & Membranes	3	2	1	3	....	....	3	....	....	2	....	....	....	....	1	....	....	....	....	....	....	....
Paralysis	1	....	1	....	....	1	....	....	1	....	....	....	....	....	....	....	....	1	....	....	....	....
Convulsions	11	6	5	11	....	....	11	....	....	9	2	....	....	....	....	....	....	....	....	....	....	....
Other Nervous Diseases	1	....	1	....	....	1	....	....	1	....	....	....	....	....	....	....	....	1	....	....	....	....

LOCAL DISEASES—Continued.																						
Organic Heart Diseases	18	9	9	4	7	7	3	2	13	....	1	....	....	1	....	1	4	5	6	....	....	....
Other Diseases of Circulatory System	5	3	2	1	3	1	....	2	3	....	....	....	....	....	1	....	....	4	....	....	....	....
Bronchitis	11	4	7	8	2	1	8	....	3	5	3	....	....	....	....	....	....	1	....	2	....	....
Pneumonia	23	14	9	14	5	4	11	2	10	5	5	2	....	3	....	1	....	5	2	....	....	....
Broncho-pneumonia	5	4	1	4	....	1	4	....	1	4	....	....	....	....	....	....	....	....	....	1	....	....
Asthma	1	1	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1	....	....
Pleurisy	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Other Respiratory Diseases	3	2	1	2	1	....	2	....	1	....	2	....	....	....	....	1	....	....	....	....	....	....
Gastritis	5	3	2	4	....	1	4	....	1	3	1	....	....	....	....	....	....	1	....	....	....	....
Diarrhœal Diseases	11	9	2	11	....	....	10	1	....	9	2	....	....	....	....	....	....	....	....	....	....	....
Appendicitis and Peritonitis	5	3	2	5	....	....	4	....	1	1	....	2	2	....	....	....	....	....	....	....	....	....
Hernia and Intestinal Obstruction	3	1	2	....	1	1	....	....	3	....	....	....	....	....	....	1	....	....	1	1	....	....
Cirrhosis of Liver	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Other Digestive Diseases	7	4	3	3	2	2	3	....	4	2	....	1	....	....	....	....	....	4	....	....	....	....
Nephritis	9	2	7	3	1	5	2	5	2	....	1	1	....	....	1	....	2	2	2	....	....	....
Other Urinary Diseases	1	....	1	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	1	....	....
Diseases of Female Generative System	1	....	1	....	....	1	....	....	1	....	....	....	....	....	....	....	1	....	....	....	....	....
Puerperal Septicæmia	1	....	1	....	1	....	....	....	1	....	....	....	....	....	1	....	....	....	....	....	....	....
Other Diseases of Pregnancy	1	....	1	....	1	....	....	1	....	....	....	....	....	1	....	....	....	....	....	....	....	....
Diseases of Skin and Cellular Tissue	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Locomotor System	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Malformations	2	1	1	2	....	....	2	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....
Congenital Debility	28	21	7	28	....	....	27	1	....	28	....	....	....	....	....	....	....	....	....	....	....	....
Senile Debility	7	3	4	....	1	6	....	....	7	....	....	....	....	....	....	....	....	....	3	3	1	....
VIOLENCE	14	14	....	3	10	1	4	2	8	....	1	1	....	2	2	2	4	2	....	....	....	....
Suicides	6	6	....	....	5	1	....	2	4	....	....	....	....	....	2	1	2	1	....	....	....	....
Accidents	8	8	....	3	5	....	4	....	4	....	1	1	....	2	....	1	2	1	....	....	....	....
Homicides	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Other Causes and Ill-defined	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

TABLE No. 13.

Showing the number of Deaths, according to Cause, Sex, Social Condition, Nativity and Age, for the month of December, 1900.

The Annual Death Rate for the month was 12.33 on an estimated population of 290,000.

During the month there were 17 deaths less than for the corresponding month of 1899.

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.			Nativity.			AGE.											
		Male.	Female.	Single.	Married.	Widowed.	Milwaukee.	U. S. other than Mil.	Foreign.	Under 1 year.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 ta 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
TOTAL—All Causes	303	164	139	166	100	37	149	45	109	64	50	16	13	26	26	26	23	31	19	9	....	....
GENERAL DISEASES	99	47	52	57	33	9	52	15	32	8	21	7	8	13	8	13	7	12	....	2	....	....
Typhoid Fever	3	2	1	1	1	1	1	....	2	....	....	1	....	....	....	1	....	1	....	....	....	....
Measles	8	5	3	8	....	....	6	2	....	1	7	....	....	....	....	....	....	....	....	....	....	....
Scarlet Fever	3	2	1	3	....	....	3	....	....	1	....	2	....	....	....	....	....	....	....	....	....	....
Whooping Cough	9	1	8	9	....	....	9	....	....	2	7	....	....	....	....	....	....	....	....	....	....	....
Diphtheria and Membranous Croup	12	6	6	12	....	....	12	....	....	1	7	4	....	....	....	....	....	....	....	....	....	....
Other Epidemic Diseases	1	1	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....	1	....	....	....	....
Pulmonary Tuberculosis	32	17	15	14	17	1	15	6	11	1	....	....	5	11	7	5	1	2	....	....	....	....
Other Tubercular Diseases	3	2	1	2	1	....	1	1	1	1	....	....	1	....	....	....	....	1	....	....	....	....
Cancer	18	7	11	3	9	6	1	4	13	....	....	....	....	....	1	5	5	5	....	2	....	....
Other General Diseases	10	4	6	5	4	1	4	2	4	1	....	....	2	2	....	2	1	2	....	....	....	....
LOCAL DISEASES	190	106	84	103	59	28	95	25	70	56	28	8	5	10	15	10	15	17	19	7	....	....
Meningitis	2	1	1	2	....	....	2	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....
Apoplexy	10	7	3	....	4	6	....	2	8	....	....	....	....	....	....	....	2	4	3	1	....	....
Other Diseases of Brain & Membranes	8	4	4	5	3	....	4	2	2	1	2	1	1	1	....	1	....	....	1	....	....	....
Paralysis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Convulsions	12	8	4	12	....	....	12	....	....	11	1	....	....	....	....	....	....	....	....	....	....	....
Other Nervous Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

LOCAL DISEASES—Continued.																						
Organic Heart Diseases	19	8	11	5	11	3	3	2	14	....	2	2	....	....	2	....	7	2	3	1	....	....
Other Diseases of Circulatory System	6	5	1	....	3	3	....	2	4	....	....	....	....	....	2	....	....	2	2	....	....	....
Bronchitis	15	9	6	10	1	4	10	1	4	5	4	....	....	1	....	....	....	2	2	1	....	....
Pneumonia	25	12	13	14	8	3	13	5	7	2	7	2	2	2	2	3	2	....	3	....	....	....
Broncho-pneumonia	7	4	3	7	....	....	6	1	....	2	5	....	....	....	....	....	....	....	....	....	....	....
Asthma	3	....	3	....	1	2	....	....	3	....	....	....	....	....	....	....	1	1	1	....	....	....
Pleurisy	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Other Respiratory Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Gastritis	4	3	1	1	2	1	1	1	2	1	....	....	....	....	....	....	1	1	1	....	....	....
Diarrhœal Diseases	9	5	4	9	....	....	8	1	....	8	....	1	....	....	....	....	....	....	....	....	....	....
Appendicitis and Peritonitis	7	3	4	3	4	1	2	2	3	....	....	1	1	1	2	1	....	1	....	....	....	....
Hernia and Intestinal Obstruction	6	5	1	1	4	1	1	1	4	....	....	....	1	....	1	1	....	2	....	1	....	....
Cirrhosis of Liver	4	3	1	....	2	2	....	....	4	....	....	....	....	....	....	1	1	1	1	....	....	....
Other Digestive Diseases	5	3	2	4	....	1	4	....	1	2	1	1	....	....	....	....	....	....	1	....	....	....
Nephritis	11	5	6	4	6	1	3	1	7	....	2	....	....	2	3	2	1	....	1	....	....	....
Other Urinary Diseases	2	2	....	1	1	....	1	1	....	1	....	....	....	....	....	....	....	1	....	....	....	....
Diseases of Female Generative System	1	....	1	....	1	....	....	1	....	....	....	....	....	....	....	1	....	....	....	....	....	....
Puerperal Septicæmia	2	....	2	....	2	....	....	1	1	....	....	....	....	1	1	....	....	....	....	....	....	....
Other Diseases of Pregnancy	4	....	4	....	4	....	....	1	3	....	....	....	....	2	2	....	....	....	....	....	....	....
Diseases of Skin and Cellular Tissue	3	3	....	2	1	....	2	....	1	2	....	....	....	....	....	....	....	....	....	1	....	....
Locomotor System	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Malformations	3	2	1	3	....	....	3	....	....	2	1	....	....	....	....	....	....	....	....	....	....	....
Congenital Debility	20	13	7	20	....	....	20	....	....	19	1	....	....	....	....	....	....	....	....	....	....	....
Senile Debility	2	1	1	....	1	1	....	....	2	....	....	....	....	....	....	....	....	....	....	2	....	....
VIOLENCE	14	11	3	6	8	....	2	5	7	....	1	1	....	3	3	3	1	2	....	....	....	....
Suicides	5	3	2	3	2	....	....	3	2	....	....	....	....	2	....	1	....	2	....	....	....	....
Accidents	9	8	1	3	6	....	2	2	5	....	1	1	....	1	3	2	1	....	....	....	....	....
Homicides	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Other Causes and Ill-defined	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

TABLE No. 14.

Showing, by wards, the Estimated Population, Total Deaths, Annual Death Rate, and the Number of Deaths from some of the more important causes, for the year 1900.

WARDS.	Population.	Number of Deaths.	Annual Death Rate per Thousand.	Deaths Under One Year of Age.	Deaths, One to Five Years of Age.	CAUSES OF DEATH.							
						Diphtheria and Memb. Croup.	Scarlet Fever.	Typhoid Fever.	Tubercular Dis.	Pneumonia.	Bronchitis.	Diseases of the Nervous System.	Diseases of the Circulatory System.
First	9,502	104	10.94	20	15	5	5	1	13	9	3	15	6
Second	9,932	118	11.88	32	7	1	1	3	19	4	5	5	15
Third	5,433	68	12.51	15	6	....	....	....	5	4	9	6	9
Fourth	10,693	165	15.43	26	7	2	1	3	29	13	7	23	22
Fifth	10,048	126	12.54	32	10	2	2	2	21	10	10	16	7
Sixth	13,709	156	11.38	36	18	6	6	2	23	13	4	18	14
Seventh	7,174	83	11.57	14	3	1	1	....	12	6	2	10	12
Eighth	19,364	200	10.33	63	24	9	5	2	17	18	7	29	12
Ninth	17,714	235	13.26	63	31	8	6	5	31	9	9	31	16
Tenth	17,065	188	11.01	45	21	11	4	....	31	13	3	19	16
Eleventh	21,987	266	12.09	97	43	6	2	8	35	17	10	33	11
Twelfth	13,257	188	14.18	65	24	6	1	5	25	17	8	18	13
Thirteenth	17,082	232	13.58	76	41	6	9	3	29	12	16	23	17
Fourteenth	20,749	335	16.14	180	49	5	3	3	28	32	18	28	11
Fifteenth	12,716	115	9.04	23	12	4	2	1	12	7	6	18	10
Sixteenth	9,665	103	10.66	14	2	3	1	2	9	11	3	12	10
Seventeenth	10,260	126	12.28	47	16	4	5	2	11	8	8	14	9
Eighteenth	13,945	197	14.13	77	37	5	2	2	16	30	3	17	12
Nineteenth	20,574	184	8.94	57	31	16	4	3	21	14	7	20	12
Twentieth	16,914	271	16.02	93	39	16	8	2	31	28	16	29	15
Twenty-first	12,217	155	12.68	72	22	6	....	....	9	12	4	17	9
Hospitals & institutions.	.....	411	.....	100	26	2	2	10	41	12	22	30	17
Total	290,000	4,026	13.88	1247	484	124	70	59	468	299	180	431	275

TABLE No. 15.

Showing, by months, the Number of Deaths occurring in the various Public and Private Institutions, Hospitals, Reformatories, etc., for the year 1900.

Hospitals and Institutions.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Children's Free Hospital	....	1	....	1	....	1	1	....	1	....	1	1	7
City Isolation Hospital	....	....	1	....	2	....	....	....	....	....	....	....	3
German Hospital	....	....	....	....	1	....	....	....	....	....	....	1	2
Home for the Friendless	....	....	....	....	....	....	....	....	....	1	....	....	1
House of Correction	1	....	....	1	....	....	....	....	....	....	....	....	2
Johnson Emergency Hospital	5	4	4	3	3	5	4	6	3	4	2	1	44
Lakeside General Hospital	....	....	....	....	....	....	....	....	....	....	1	....	1
Little Sisters of the Poor	1	4	1	....	....	2	2	1	4	2	3	2	22
Milwaukee Hospital	4	3	4	2	6	6	10	8	8	4	6	5	66
Milwaukee Infants' Home	....	....	2	....	....	....	....	2	....	....	1	....	5
Milwaukee Pulmonary Sanitarium	3	....	2	....	1	....	....	....	....	....	....	....	6
Notre Dame Convent	....	....	....	....	....	....	....	1	2	....	....	1	4
Protestant Home for Aged	1	....	1	....	....	....	2	1	....	....	1	....	6
Riverside Sanitarium	....	....	....	1	....	....	....	2	....	1	....	....	4
St. John's Home	....	....	....	....	1	....	....	....	1	....	....	1	3
St. Joseph's Hospital	....	1	2	6	3	2	5	3	3	2	1	6	34
St. Mary's Hospital	4	2	5	5	5	3	3	4	2	4	2	5	44
St. Vincent's Asylum	1	4	1	....	....	2	2	1	4	2	3	2	22
Trinity Hospital	5	3	3	4	4	3	2	5	4	3	4	4	44
Wisconsin General Hospital	....	....	1	....	2	2	3	3	1	....	....	....	12
Others, not specified above	....	....	1	....	3	2	....	....	....	2	....	1	9
Total	25	22	28	23	31	28	34	37	33	25	25	30	341

TABLE No. 16.

Showing Nativity of those dying in the city during the year 1900.

UNITED STATES.		FOREIGN.	
Milwaukee	2108	Austria-Hungary	23
Wisconsin outside Milwaukee	250	Bohemia	42
Connecticut	7	Canada	27
Illinois	31	Denmark	5
Indiana	5	England	50
Iowa	5	France	5
Massachusetts	12	Germany	839
Michigan	17	Holland	10
Minnesota	5	Ireland	127
Missouri	6	Italy	5
New Hampshire	6	Norway	20
New Jersey	3	Poland	146
New York	95	Russia	14
North Carolina	3	Scotland	13
Ohio	21	Sweden	8
Pennsylvania	25	Switzerland	17
Vermont	12	Wales	3
Virginia	3	Other foreign countries	1
Other of United States	57	Total	4026

TABLE No. 17.

Showing, by months, the Disposition in the various Cemeteries, and otherwise, of the bodies of those for whom burial or removal permits were issued during the year.

CEMETERIES, ETC.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	Permits for Still Births.	Per. for Bodies brought to City.	Grand Total.
Union	109	109	74	98	107	73	105	113	90	60	65	65	1068	103	120	1291
Forest Home	52	54	47	59	62	44	30	55	43	51	35	31	563	24	153	740
Calvary	67	88	77	80	79	58	73	97	75	82	63	77	916	59	14	989
Polish Union	33	33	24	33	32	36	49	63	52	31	37	44	467	43	1	511
Pilgrims' Rest	30	19	35	20	27	20	19	35	31	21	29	20	306	21	....	327
Wanderer's Rest	14	7	17	3	14	13	8	21	17	3	8	11	136	18	4	158
Trinity	8	8	6	8	8	4	10	15	14	7	12	10	110	16	1	127
Greenwood	....	4	1	....	....	3	....	4	3	....	....	1	16	....	....	16
Spring Hill	1	4	1	2	1	....	....	2	3	....	1	2	17	2	....	19
Second Home	3	3	1	2	1	....	3	5	....	....	....	1	19	3	2	24
County Farm	2	2	2	2	4	5	2	4	4	2	2	2	33	18	2	53
Outside Milwaukee	23	26	40	33	38	21	26	26	30	31	26	36	356	8	23	387
For Anatomical Purposes	2	3	....	3	....	1	....	1	....	2	4	3	19	....	....	19
Total	344	360	325	343	373	278	325	441	362	290	282	303	4026	315	320	4661

TABLE No. 18.

Showing Deaths, by Sex, at different ages and by months for the year 1900.

MONTH.	SEX.	Total for Month.	AGE AT DEATH.												
			Under 1 Year.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100
January	Male	178	59	25	6	7	13	12	16	10	11	11	8	....	....
	Female	166	47	20	7	8	13	9	8	13	13	21	6	....	1
February	Male	180	56	24	6	9	3	11	16	11	14	23	6	1	....
	Female	180	47	22	11	10	15	15	14	7	10	18	9	2	....
March	Male	145	53	14	3	1	8	8	17	9	13	12	7	....	....
	Female	180	53	20	3	5	17	8	13	11	19	18	10	3	....
April	Male	196	63	26	4	8	17	10	19	7	20	16	6	....	....
	Female	147	35	16	8	6	10	14	12	7	9	24	6	....	....
May	Male	190	66	15	5	9	11	17	14	19	8	16	8	2	....
	Female	183	44	24	4	12	12	12	8	16	18	19	10	4	....
June	Male	150	47	18	11	4	14	9	15	5	7	16	3	1	....
	Female	128	22	20	6	8	11	13	9	13	10	13	3	....	....
July	Male	175	73	17	4	6	10	14	13	6	12	15	4	1	....
	Female	150	53	16	5	9	11	13	8	3	11	14	6	1	....
August	Male	245	114	27	9	14	10	13	17	12	9	17	3	....	....
	Female	196	79	22	1	5	16	15	19	13	11	13	2	....	....
September	Male	193	71	22	5	9	10	13	18	15	8	11	11	....	....
	Female	169	54	25	5	9	13	11	11	11	10	12	7	1	....
October	Male	141	32	17	5	9	9	13	14	12	10	10	9	1	....
	Female	149	39	12	3	6	11	12	14	11	16	14	9	2	....
November	Male	154	52	18	6	4	10	14	8	12	18	8	4	....	....
	Female	128	24	14	10	6	12	6	10	5	16	17	6	2	....
December	Male	164	39	26	10	5	6	19	13	12	19	8	7	....	....
	Female	139	25	24	6	8	20	7	13	11	12	11	2	....	....
Total by Sexes	Male	2111	725	249	74	85	121	153	180	130	149	163	76	6	....
	Female	1915	522	235	69	92	161	135	139	121	155	194	76	15	1
Grand Total		4026	1247	484	143	177	282	288	319	251	304	357	152	21	1

BIRTHS.

TABLE No. 19.

Showing, by months, the Total Number Reported, their Color, Sex, and by Whom Reported, for the year 1900.

MONTHS.	Color.		Sex.		By Whom Reported.		Total.
	White.	Black.	Male.	Female.	Physician.	Midwife.	
January	665	2	341	326	261	406	667
February	567	.....	287	280	196	371	567
March	683	2	359	326	205	480	685
April	585	.....	307	278	180	405	585
May	582	.....	314	268	199	383	582
June	568	.....	303	265	214	354	568
July	698	.....	359	339	260	438	698
August	651	.....	344	307	203	448	651
September	610	1	328	283	235	376	611
October	753	2	384	371	274	481	755
November	570	.....	292	278	209	361	570
December	552	1	262	291	156	397	553
Total	7,484	8	3,880	3,612	2,592	4,900	7,492

TABLE No. 20.

Showing, by months, the Nativity of Parents of Children whose births were reported during the year 1900.

NATIVITY OF PARENTS.	FATHERS.													MOTHERS.												
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Milwaukee	104	97	130	73	83	106	106	99	94	110	91	93	1,186	126	111	143	112	128	111	131	132	100	141	110	98	1,443
Wisconsin, other than Milwaukee	56	54	58	61	61	67	73	61	65	75	55	49	735	90	64	89	77	62	90	112	90	94	99	73	62	1,002
Other parts of United States	83	60	74	53	60	60	90	78	74	73	58	65	828	69	70	64	69	74	73	77	72	76	68	72	60	844
Germany	264	227	277	276	268	213	283	242	268	299	254	245	3,116	241	219	275	228	232	184	257	227	255	281	213	235	2,847
Other European countries	150	116	139	113	108	122	143	159	104	190	102	98	1,544	136	100	113	97	85	110	120	128	84	164	97	97	1,331
Unknown or not stated	10	13	7	9	2	....	3	12	6	8	10	3	83	5	3	1	2	1	....	1	2	2	2	5	1	25
Total	667	567	685	585	582	568	698	651	611	755	570	553	7,492	667	567	685	585	582	568	698	651	611	755	570	553	7,492

TABLE No. 21.

Showing, by wards and months, the Births reported during the year 1900.

WARDS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
First	9	10	9	4	7	4	13	7	7	6	3	6	85
Second	16	16	14	12	17	13	10	16	20	13	15	14	176
Third	9	14	9	2	9	21	3	19	6	20	4	6	122
Fourth	10	8	17	9	11	6	10	8	17	14	13	7	130
Fifth	5	11	19	10	11	12	10	11	10	16	6	14	135
Sixth	20	16	32	20	29	21	29	30	20	25	25	27	294
Seventh	5	3	....	3	3	4	5	2	3	4	6	2	40
Eighth	34	24	33	22	23	35	36	19	50	18	27	23	344
Ninth	41	37	52	30	26	41	45	44	41	38	34	48	477
Tenth	38	39	48	33	24	31	29	26	19	44	33	34	398
Eleventh	64	45	81	65	70	50	78	62	74	67	47	49	752
Twelfth	38	21	29	29	34	16	36	35	29	41	22	21	351
Thirteenth	35	36	39	61	39	31	42	45	34	58	36	38	494
Fourteenth	88	64	80	68	62	52	95	89	54	117	76	79	924
Fifteenth	12	18	17	17	26	20	15	15	17	16	13	22	208
Sixteenth	8	12	7	5	10	12	7	7	8	11	6	5	98
Seventeenth	26	23	26	29	21	24	18	39	30	28	18	21	303
Eighteenth	37	28	22	28	16	34	23	24	29	26	30	32	329
Nineteenth	50	39	52	41	37	38	54	42	57	49	51	38	548
Twentieth	36	47	42	38	37	41	57	35	24	53	41	28	479
Twenty-first	26	29	32	31	33	30	40	33	25	59	13	26	377
Not stated	60	27	25	28	37	32	43	43	37	32	51	13	428
Total	667	567	685	585	582	568	698	651	611	755	570	553	7492

TABLE No. 22.

Showing, by months, the Total Number of Births reported, the Birth Rate per 1,000, the Number of Males and Females, together with the Percentage.

MONTHS.	Number of Births Reported.	Birth Rate per 1000 Population.	Males	Females.	Percentage of Males to Total.	Percentage of Females to Total.
January	667	27.14	341	326	51.1	48.9
February	567	25.42	287	280	50.6	49.4
March	685	27.87	359	326	52.4	47.6
April	585	24.61	307	278	52.4	47.6
May	582	23.68	314	268	53.9	46.1
June	568	23.89	303	265	53.3	46.7
July	698	28.40	359	339	51.4	48.6
August	651	26.49	344	307	52.8	47.2
September	611	25.70	328	283	53.6	46.4
October	755	30.72	384	371	50.8	49.2
November	570	23.98	292	278	51.2	48.8
December	553	22.50	262	291	47.3	52.7
Total	7,492	25.83	3,880	3,612	51.8	48.2

TABLE No. 23.

Showing for the years 1894 to 1900, inclusive, the Total Number of Births and Deaths, Birth and Death Rates, and Yearly Excess of Births over Deaths.

YEARS.	Population.	Births.	Deaths.	Excess of Births over Deaths.	Rate per 1000 Population.		Excess of Birth rate over Death rate.
					Births.	Deaths.	
1894	241,000	7,624	4,253	3,371	31.63	17.64	13.99
1895	250,000	7,813	3,885	3,928	31.25	15.54	15.71
1896	260,000	7,855	3,904	3,951	30.21	15.00	15.21
1897	275,000	7,642	3,606	4,036	27.79	13.11	14.68
1898	280,000	7,796	3,338	4,458	28.09	11.92	16.17
1899	285,000	7,544	3,843	3,701	26.47	13.48	12.99
1900	290,000	7,491	4,026	3,465	25.83	13.88	11.95

MARRIAGES.

TABLE No. 24.

Showing, by months, the Total Number of Marriages Reported, the Color of the Contracting Parties, and the Ceremony by which the Marriage was Performed.

MONTHS.	Number of Marriages reported.	Color.				Ceremony.					
		White.		Black.		Religious.			Civil.		
		Husband.	Wife.	Husband.	Wife.	Protestant.	Catholic.	Jewish.	Justice of Peace.	Judge.	Court Commissioner.
January	152	151	151	1	1	93	26	2	31	.....	.....
February	108	108	108	.....	.....	56	31	3	16	.....	2
March	168	166	167	2	1	59	64	5	37	2	1
April	128	127	128	1	.....	70	5	4	43	.....	7
May	218	218	217	.....	1	127	37	3	48	3	.....
June	239	237	237	2	2	122	72	3	41	1	.....
July	258	257	257	1	1	130	73	10	38	.....	7
August	189	188	188	1	1	77	34	7	69	2	.....
September	204	204	204	.....	.....	109	64	3	26	1	1
October	268	268	268	.....	.....	128	94	6	37	.....	3
November	245	245	245	.....	.....	124	83	3	35	.....	.....
December	172	172	172	.....	.....	79	48	2	40	1	2
Total	2349	2341	2342	8	7	1174	631	51	461	10	23

TABLE No. 25.

Showing, by months, the Total Number of Marriages Reported, and the Place of Residence of Husband.

MONTHS.	Total number of Marriages reported.	Residence of Husband.					
		Milwaukee.	Wisconsin other than Milwaukee.	Chicago.	Illinois other than Chicago.	Other places.	Unknown or not stated.
January	152	108	18	5	1	17	3
February	108	73	19	4	2	10	.....
March	168	140	10	10	3	5	.....
April	128	100	14	6	1	7	.....
May	218	189	14	7	1	7	.....
June	239	202	18	9	2	8	.....
July	258	211	15	13	5	13	1
August	189	143	10	19	2	15	.....
September	204	153	20	11	2	15	3
October	268	242	13	6	1	4	2
November	245	203	26	9	1	6	.....
December	172	144	14	3	1	10	.....
Total	2349	1908	191	102	22	117	9

TABLE No. 26.

Showing, by months, the Total Number of Marriages Reported, with the Place of Birth of the Contracting Parties.

MONTHS.	Number of Marriages reported.	Birthplace of Parties.									
		Milwaukee.		Wisconsin other than Milwaukee		Others of United States.		Foreign.		Unknown or not stated.	
		Husband.	Wife.	Husband.	Wife.	Husband.	Wife.	Husband.	Wife.	Husband	Wife.
January	152	45	46	19	34	30	23	57	47	1	2
February	108	18	28	18	21	25	15	47	43	.....	1
March	168	41	51	25	35	25	22	76	59	1	1
April	128	38	47	24	23	20	24	46	34	.....	.....
May	218	63	85	30	35	26	23	99	73	.....	2
June	239	62	75	33	39	33	34	111	90	.....	1
July	258	72	116	49	38	37	36	100	68	.....	.....
August	189	39	55	23	20	36	39	91	74	.....	1
September	204	48	74	32	29	41	33	83	68	.....	.....
October	268	80	98	37	41	42	30	107	95	2	4
November	245	65	92	44	36	29	15	107	99	.....	3
December	172	42	71	33	30	25	15	72	55	.....	1
Total	2349	613	838	367	381	369	309	998	805	4	16

CONTAGIOUS DISEASES.

TABLE No. 27.

Showing for eleven years, 1890 to 1900, inclusive, the Number of Cases of and Deaths from certain Contagious Diseases.

YEARS.	Diphtheria.		Scarlet Fever.		Typhoid Fever.		Measles.		Small Pox.	
	Cases	Deaths.	Cases.	Deaths.	Cases.	Deaths	Cases.	Deaths.	Cases.	Deaths.
1890.....	827	241	257	38	.....	73	.....	33	1	.....
1891.....	1489	400	792	86	166	77	62	38	.....	.....
1892.....	1193	400	559	76	196	76	94	21	1	.....
1893.....	620	273	526	94	382	95	221	42	1	.....
1894.....	436	165	176	12	249	70	478	69	894	244
1895.....	375	179	144	5	204	63	11	1	176	30
1896.....	919	254	120	4	133	46	281	29	.....	.....
1897.....	708	138	89	3	109	31	289	36	.....	.....
1898.....	343	61	108	2	132	46	23	2	.....	.....
1899.....	722	109	1100	36	174	43	312	26	14	3
1900.....	716	124	1726	70	340	59	403	36	2	.....

TABLE No. 28.

Showing, by wards and months, the Cases of and Deaths from Diphtheria, Scarlet Fever, Typhoid Fever, Measles and Smallpox, for the year 1900.

WARDS.	Diphtheria.		Scarlet Fever.		Typhoid Fever.		Measles.		Small Pox.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
First	25	5	53	5	5	1	33	.....	.....	.....
Second	14	1	55	1	8	3	14	1	.....	.....
Third	5	.....	18	.....	5	.....	12	.....	.....	.....
Fourth	24	2	45	1	8	3	12	.....	1	.....
Fifth	15	2	44	2	13	2	7	.....	.....	.....
Sixth	39	6	74	6	10	2	18	2	1	.....
Seventh	15	1	29	1	2	.....	28	.....	.....	.....
Eighth	41	9	104	5	10	2	7	2	.....	.....
Ninth	45	8	106	6	20	5	34	2	.....	.....
Tenth	64	11	103	4	24	.....	19	2	.....	.....
Eleventh	28	6	64	2	25	8	4	1	.....	.....
Twelfth	35	6	33	1	25	5	11	2	.....	.....
Thirteenth	42	6	122	9	6	3	42	5	.....	.....
Fourteenth	25	5	26	3	22	3	3	5	.....	.....
Fifteenth	43	4	94	2	19	1	22	.....	.....	.....
Sixteenth	26	3	100	1	26	2	18	.....	.....	.....
Seventeenth	12	4	102	5	12	2	11	1	.....	.....
Eighteenth	23	5	88	2	19	2	30	.....	.....	.....
Nineteenth	96	16	196	4	68	3	35	1	.....	.....
Twentieth	66	16	138	8	7	2	19	1	.....	.....
Twenty-first	33	6	93	.....	1	.....	24	5	.....	.....
Hospitals, etc.	.....	2	39	2	5	10	.....	6	.....	.....
Total	716	124	1726	70	340	59	403	36	2	.....

REPORT

OF

ANALYST.

REPORT OF ANALYST.

Dr. F. M. Schulz, Commissioner of Health:

DEAR SIR—I have the honor to submit the following report, showing the work done in the chemical and bacteriological laboratories during the year 1900.

The inspection of milk has been given our chief attention, as is fitting when the importance of a pure milk supply is understood. It would be quite in line with progressive sanitary science if more time could be given to this branch of the department,—if, in fact, our milk inspectors could give their whole time to the inspection of the dairies and their products. I believe a city of this size can not afford to do otherwise than keep a strict supervision over its milk supply, and this it can not thoroughly do without more time at the disposal of its inspectors.

Much time and effort was spent last summer in the examination of our lake water, and it is believed that it was pretty well shown that there is very little danger of any sewage getting out to the intake at any time.

The number of bacteriological examinations made was more than doubled, and the value of these tests to physicians, particularly of the diphtheria and typhoid cases, becomes more and more apparent. This branch of the department should also be further developed.

With regard to the examination of well water, it has been found that nearly all of the wells in the city are more or less contaminated by the leaching of adjacent privy vaults, and are therefore rendered obnoxious from an aesthetic standpoint, but they are also a source of danger as a cause of stomach and intestinal diseases, including typhoid.

TABLE No. 1.

Number of milk dealers licensed during the year	1,192
Total samples of milk analyzed, Jan. 1, 1900—Jan. 1, 1901	5,614
Average per cent. of fat of 5,614 samples	3.77
Number of samples below 3% butter fat	150
Per cent. below 3%	2.67
Average fat of 150 samples	2.65%
Average fat of 5,464 samples	3.80%
Total samples brought in by inspectors	5,317
Number samples below 3%	127
Per cent. below 3%	2.38
Number samples brought in by private individuals	297
Average per cent. of fat of 297 samples	3.70
Number of samples below 3%	23
Per cent. below 3%	2.67
Number of samples from depot	1,972
Average per cent. of fat of 1,972 samples	3.81
Number of samples below 3%	22
Per cent. below 3%	1.11
Number of samples of cream tested	908
Average per cent. of fat of 908 samples	19.46
Number of arrests made	50
Amount of fines imposed	$725
Skimmed milk and butter milk analyzed	6
Gallons of milk confiscated	48

TABLE No. 2.

MONTH.	Samples Analyzed.	Av. Fat.	Quarts.	Below 3%.	DISPOSAL.							CREAM.		Av. Fat.
					Depot		Warned	Private.	Dupli-cates.	Arrests.	Fines.	Depot.	Rec'd.	
					Dump	No. Ac.								
January	548	3.845	13.768	9	.....	.....	4	4	.....	1	.....	23	17	20.21
February	324	3.83	7,860	2	.....	.....	2	.....	.....	.....	.....	39	7	20.13
March	478	3.73	12,428	15	.....	.....	8	1	1	5	$100 00	60	9	20.62
April	654	3.73	15,825	16	1	.....	3	1	3	8	125 00	63	8	19.80
May	660	3.65	17,997	16	.....	2	4	1	1	8	150 00	45	1	19.40
June	364	3.60	10,280	24	5	5	5	7	.....	3	.....	44	4	18.90
July	542	3.61	13,175	32	.....	3	7	6	1	16	275 00	60	3	18.05
August	518	3.83	13,917	15	.....	3	7	1	.....	4	25 00	69	3	18.55
September	314	3.76	9,789	10	1	1	3	1	.....	4	25 00	99	19	19.15
October	442	3.87	12,879	4	.....	1	3	.....	.....	.....	.....	76	14	20.29
November	476	3.98	12,322	5	.....	.....	4	.....	.....	1	25 00	94	1	19.49
December	294	3.89	10,538	2	.....	.....	1	1	.....	.....	.....	147	8	19.27
Total	5614	3.772	150,778	150	7	15	51	23	6	50	$725 00	819	89	19.46

TABLE No. 3.

Summary of Disposal of Samples Below Standard.

Private individuals	23
Depot—Confiscated	7
Not confiscated	15
Arrests—Below standard	48
Preservatives	2
Warned	51
Duplicates	6
Total	152

TABLE No. 4.

	1899.	1900.
Number of analyses of milk made	6,318	5,614
Number of samples below 3%	248	150
Per cent. below 3%	3.92	2.67
Average per cent. of fat of milk	3.76	3.77
Number of analyses of cream made	276	908
Average per cent. of fat of cream	20.95	19.46
Number of arrests made	106	50
Amount of fines imposed	$830	$725

TABLE No. 5.

Table Showing Quality of Milk from Various Sources.

SOURCE.	No. Samples.				Average Fat.				Below 3.0 Per Cent.				Per Cent. Below 3.0 Per Cent.			
	1897.	1898	1899.	1900.	1897.	1898.	1899.	1900.	1897	1898.	1899.	1900.	1897.	1898.	1899.	1900.
City Dealers	4,018	5,475	3,655	3,345	3.73	3.75	3.74	3.76	215	285	154	105	5.35	5.00	4.21	3.11
Depots	72	583	2,007	1,972	4.18	3.80	3.80	3.81	.....	21	49	22	.....	2.46	2.44	1.11
Received	585	591	656	297	3.80	3.63	3.75	3.70	39	53	45	23	6.66	8.97	6.86	7.80
Total	4,675	6,919	6,318	5,614	3.74	3.74	3.76	3.77	254	353	248	150	5.43	5.12	3.92	2.67
Cream	54	102	276	908	19.40	17.80	20.95	19.46								

PRELIMINARY REPORT ON THE EXAMINATION OF WATER FROM MILWAUKEE BAY, WITH REFERENCE TO THE DISTRIBUTION OF SEWAGE, ESPECIALLY IN THE DIRECTION OF THE INTAKE.

It has been a disputed point among some people, who have taken more than a casual interest in the matter, whether the city's sewage which empties into the lake at Jones Island may or may not, under certain conditions, be carried out to the new intake and thus contaminate the city water supply. It is believed by some that a strong wind from the southwest generally, if not invariably, has this effect, and in support of this belief they say that when such winds occur there is plainly visible a long streak of water varying in color from the main body of water, running from the sewer outlet in a northeasterly direction toward the intake, and it was mainly to establish the truth or falsity of this theory that the work of taking samples and examining them was begun in the spring of 1900. The original intention was to make a tolerably complete physical, chemical and bacteriological examination of the samples, and also a microscopical examination of the plankton. For lack of time, however, it was found necessary to omit the microscopical examination to a mere taking of temperature and observation of the gross appearance of the samples. It is probable that the data derived from these sources would not have added anything important to the following deductions, and moreover it was found when the results of the summer's work were studied, that the chemical examination was useless in throwing any light on the distribution of the sewage, and that on the bacteriological examination alone could any information be obtained. That, however, is entirely satisfactory as far as it goes, and a continuance of this work for two or three more summers will probably solve most of the obscure points which are now present.

The basis of the determinations is taken to be the probable presence of the colon bacillus, and at present no other standard can be well taken. Perhaps with more complete data another standard may be found desirable.

Three different media were used—namely, Dunham's solution, Lactose-litmus-agar, and 1% glucose bouillon in the fermentation tube. In Dunham's solution 1 c. c. of water was used, but as indol was almost invariably produced in twenty-four hours, it is evident that there are constant and numerous indol-producing bacteria, other than the colon bacillus, so that this test can be excluded, except in one or two cases in which indol was not formed even in forty-eight hours, where it has a

negative significance. It is probable that indol-producing and nitrifying bacteria are always present in the lake water, though in the winter the nitrifying bacteria, at any rate, appear to be inactive.

In forming conclusions from the growth on lactose-litmus-agar, we may first of all exclude the colon bacillus from plates where no acid colonies were formed, and we may also find that in some plates with acid colonies the acidity is not due to the colon bacillus. Many common forms produce acid products, so that we must take the growth on other media into consideration where acid colonies are produced. Of the 53 samples examined, 25 did not produce acid products, and these may be said to be free from the colon bacillus. Of the remaining 28 samples which formed acid products, 10 were probably not due to the colon bacillus, since the quantity of gas produced in the fermentation tube falls far below that produced by the colon bacillus. This leaves 15 samples which probably contain the colon bacillus, and 3 others which we must deal with separately, along with another 3 which were included in the first 25, and which together comprise a group which was taken July 13.

When we come to the fermentation tube, we find that both the open and closed arms have become turbid in twenty-four hours in the majority of cases with 1 c. c. of water. And in the few cases where forty-eight hours were required to produce turbidity, the amount of gas formed was nil, or present in only very small quantity.

In making estimates from the quantity of gas formed, I have assumed that where gas was not produced to the amount of 50% or more in forty-eight hours, it was due to bacteria other than the colon bacillus, but it also seems probable that at times where more than 50% of gas was formed it must have been due to bacteria or causes other than the colon bacillus, and I have thought that yeast may have been responsible for some cases of very large gas formation.

The relation of gases, i. e., H to CO_2, is also important in some cases. Unfortunately, gelatine plates could not be used during the hot summer months. Where they were used, however, it is interesting to note the relationship existing between them and the corresponding agar plates at body temperature.

The samples were taken in groups of six, and if we take these up seriatim some interesting points will be brought out.

Of the first six, taken May 29th, three showed acid colonies and three none.

Of the three acid colonies, only one developed sufficient gas to make one suspect the colon bacillus. This one was taken at a depth of twenty feet, at about half a mile from the lighthouse. This sample was clearly contaminated with sewage. Sample No. 6, taken off Juneau Park, while chemically showing much organic matter, was free from suspicious bacteria.

In the second group of six (7-12) two were alkaline and four acid, but the small quantity of gas formed in the acid ones makes it seem improbable that they were due to the colon bacillus. An exception was made in this case and the gas allowed to accumulate for seventy-two hours instead of the usual forty-eight hours.

In the third group of six (13-18) two were alkaline and four acid, but the large amount of gas formed in the acid ones leads to the suspicion that the colon bacillus may be present, though it will be seen that the samples in which no acid colonies were produced, produced an equally large quantity of gas.

The fact that 17 and 18 were taken from nearly the same place as No. 5 might also be taken as an argument in favor of colon at that place.

It will be noticed that the number of colonies up to this time is smaller than in the later samples. I attribute this to the earlier season, with colder temperature of the water.

Samples 19 to 24 are puzzling. In only one was indol formed in twenty-four hours, while in two it had not formed in forty-eight hours, and yet in all of these a large amount of gas was formed, and usually the relation of the gases was such as to indicate colon. Another peculiar feature of this set is that some agar plates showed acid colonies, while others did not, although many colonies were formed. These samples were taken southward from the sewer outlet toward South Point, and as samples taken at another time from the southern part of the bay indicated C. Com., it is probable that these samples are contaminated with sewage, as well as the entire southern portion of the bay.

Samples (25-30) taken from the old intake along the line of the government pier, showed no acid colonies and therefore no C. Com.

Samples (31-36) beginning at the intake and extending northward to near Whitefish Bay showed great purity. That large numbers of bac-

1900.

DATE.	No.	ATMOSPHERIC CONDITIONS.	LACTOSE-LITMUS AGAR. 1 C. C. Reaction.	LACTOSE-LITMUS AGAR. Water. No. Col. 24 Hrs.	FERMENTATION TUBE. TURBIDITY. Open. Hours.	FERMENTATION TUBE. TURBIDITY. Closed. Hours.	FERMENTATION TUBE. GAS. Quantitative. 1	FERMENTATION TUBE. GAS. Quantitative. 2	FERMENTATION TUBE. GAS. Qualitative. 1	FERMENTATION TUBE. GAS. Qualitative. 2	GELATIN.
April 21.....	A	Cloudy. W	Acid	Many	24	24	25%	.....	$H:CO_2$ 1:0	.....	.....
April 24.....	B	Clear.	"	2080	24	24	25%	.....	1:0	.....	3375
April 27.....	C		Alk.	Few	48	48	None	.....	None	.....	31
May 1.....	D	Clear.	"	7	24	24	"	.....	"	.....	48
May 7.....	E	Cloudy.	1 Acid	4	24	24	50%	.....	1:1	.....	112
April 5.....	F		Alk.	2	48	72	None	.....	None	.....	.....
May 29.....	1	Foggy.	Alk.	0	48	None	None	.....	None	.....	27
	40			98	24	24	60%	.....	1:1	.....	.....
	41		"	918	24	24	90%	.....	1:1	.....	.....
	42		"	840	24	24	50%	.....	4:1	.....	.....
September 12.	43		Alk.	1860	24	24	50%	20%	1:1	.....	.....
	44		"	1320	24	24	50%	50%	1:1	1.1	.....
	45	Wind	"	720	24	24	50%	33%	1:1	.....	.....
	46	Clear after Sto	"	780	24	24	50%	33%	1:1	.....	.....
	47		Acid	20	24	24	None	20%	None	Trace	.....
	48		"	50	24	24	33%	50%	1:1	1:1	.....
September 26..	I		Alk.	25	24	24	25%	15%	3:1	Trace	.....
October 4.....	49		Acid	1350	24	24	25%	40%	2:1	1:1	.....
	50	Wind S. E	"	1092	24	24	50%	50%	2:1	2:1	.....
	51		"	780	24	24	50%	50%	1:1	2:1	.....
	52		"	660	24	24	60%	50%	2:1	2:1	.....
	53	Not taken	.....	.....	.....	.....	.....	.....	.....	.....	.....
	54		Alk.	20	24	24	None	33%	None	4:1	.....
October 30.....	J		Alk.	50	24	48	None	25%	None	.....	.....
November 22..	K		"	8	24	48	"	None	"	None	.....

ANALYSIS OF WATER TAKEN FROM MILWAUKEE BAY—1900.

DATE.	No.	ATMOSPHERIC CONDITIONS.	PLACE.	DEPTH. Feet.	TEMP. FAHR.	PHYSICAL APPEARANCE.	NITRATES.	NITRITES.	FREE AMMONIA.	ALB. AMMONIA.	OXIDIZABLE MATTER.	DUNHAM'S SOLUTION. 1 C.C. Indol. Hours	DUNHAM'S SOLUTION. Water. Turbid. Hours	LACTOSE-LITMUS AGAR. 1 C.C. Reaction.	LACTOSE-LITMUS AGAR. Water. No. Col. 24 Hrs	FERMENTATION TUBE. TURBIDITY. Open. Hours.	TURBIDITY. Closed. Hours.	GAS. Quantitative. 1	GAS. Quantitative. 2	GAS. Qualitative. 1	GAS. Qualitative. 2	GELATIN.
April 21	A	Cloudy. Wind N. E.	Laboratory Tap			Turbid.	Small Amount	None	0.025	0.020	0.28	24		Acid	Many	24	24	25%		HCO_2 1:0		
April 24	B	Clear. " "	Lighthouse Pier	10		"	" "	"	0.014	0.036	0.55	24		"	2080	24	24	25%		1:0		3375
April 27	C	" "	Laboratory Tap			Clear	" "	"	0.002	0.011	0.17	48		Alk.	Few	48	48	None		None		31
May 1	D	Clear. " "	Pumping Station		42°	"	" "	"	0.009	0.008	0.12	72		"	7	24	24	"		"		48
May 7	E	Cloudy. " S. E.	Laboratory Tap			Sl. Turbid.	" "	"	0.003	0.009	0.13	48		1 Acid	4	24	24	50%		1:1		112
April 5	F		" "			"	Heavy Trace.	"	0.000	0.010	0.10	48		Alk.	2	48	72	None		None		
May 29	1	Foggy. Calm.	½ mile out from Old Intake	10	50°	Clear	None		0.010	0.010	0.10	None	None	Alk.	0	48	None	None		None		27
	2	Wind S. E.	" " "	24	48°	"	"		0.008	0.009	0.12	48	48	"	0	48	"	"		"		18
	3		40 rods East of S. end Government Pier	10	49°	"	Trace		0.014	0.018	0.11	24	24	3 Acid	14	24	24	"		"		78
	4		" " " " "	24	48°	Sediment.	"		0.005	0.013	0.14	24	24	2 "	25	24	24	"	33%	"	2:1	69
	5	Clear. Calm.	⅔ dist. S. end Gov. Pier to Light. Pier	10	49°	"	"		0.005	0.037	0.14	24	24	8 "	132	24	24	{50% 50%}	{50% 50%}	1:1	1:1	1304
	6		⅔ dist. from Gap to Juneau Pk. Boathouse	10	49°	"	Small Amount		0.005	0.023	0.12	24	24	Alk.	34	24	24	None		None		654
June 12	7	Wind S. E.	1 mile East S. end Government Pier	10	54°	Clear	None		Trace	0.007	0.15	48	48	Alk.	1	24	24	None	25%	None	2:1	5
	8		" " " "	30	53°	"	"		"	0.008	0.13	48	24	"	120	24	24	"	25%	"	2:1	125
	9		Out from Harbor	10	52°	"	"		0.001	0.008	0.14	24	24	Acid	72	24	24	"	None	"	None	80
	10		" "	25	53°	"	"		0.001	0.011	0.14	24	24	"	420	24	24	33%	25%	1:1	2:1	540
	11		Same, but nearer Shore	10	52°	"	"		None	0.008	0.12	24	24	"	360	24	24	10%	10%	1:0	1:0	423
	12		" " "	16	53°	"	"		"	0.008	0.125	24	24	"	960	24	24	33%	20	2:1	2:1	6284
June 26	13	Wind S. W.	10 rods South end Government Pier	10	56°		Small Amount		0.005	0.013	0.125	48	24	Alk.	8	24	24	60%	60%	2:1	2:1	
	14		" " " " "	22	55°		" "		0.002	0.009	0.13	48	24	"	1	24	24	60%	60%	5:1	5:1	
	15		⅓ from Pier to Lighthouse	10			None		0.015	0.017	0.15	24	24	Acid	660	24	24	60%	50%	5:1	2:1	
	16		" " "	20			"		None	0.010	0.125	24	24	"	7	24	24	60%	100%	5:1	3:1	
	17		⅔ from Pier to Lighthouse	10			Small Amount		0.008	0.015	0.20	24	24	"	1200	24	24	50%	50%	3:1	3:1	
	18		" " "	16	54°		" "		0.003	0.011	0.14	24	24	"	15	24	24	50%	50%	5:1	5:1	
July 13	19	Wind S. W. Clear.	1 mile out from Rolling Mills	10	55°	Clear	Trace		0.006	0.011	0.11	48	24	Alk.	318	24	24	70%	40%	1:2	2:1	
	20		" " " "	21	55°	"	"		0.006	0.012	0.125	48	24	Acid	1260	24	24	70%	60%	1:2	1:1	
	21		1½ mile out from Rusk Avenue	10	55°	"	"		None	0.005	0.13	None	24	Alk.	324	24	24	50%	50%	2:1	2:1	
	22		" " " "	21	51°	"	"		0.003	0.011	0.125	"	24	Acid	1860	24	24	80%	60%	3:1	2:1	
	23		1 mile out from St. Francis	10	54°	"	"		0.002	0.013	0.14	48	24	"	720	24	24	80%	80%	3:1	3:1	
	24		" " "	10	54°	"	"		0.002	0.010	0.17	24	24	Alk.	1800	24	24	100%	80%	?	3:1	
July 24	25		½ mile out from Old Crib	10			None		0.002	0.010	0.125	24	24	Alk.	22	24	24	None	25%	None	1:0	
	26		" " "	32			Small Amount		Trace	0.010	0.135	24	24	"	18	24	24	50%	40%	1:1	1:1	
	27		½ mile out from Gap	10			Heavy Traces		0.003	0.011	0.125	24	24	"	660	24	24	50%	50%	2:1	2:1	
	28		" " "	33			Small Amount		0.003	0.009	0.145	24	24	"	180	24	24	60%	50%	1:1	2:1	
	29		½ mile S. end Gov. Pier toward City Hall	10			" "		0.004	0.012	0.125	24	24	"	576	24	24	60%	60%	4:1	4:1	
	30		" " " " "	33			" "		0.002	0.008	0.13	24	24	"	336	24	24	33%	33%	1:0	1:0	
August 10	31	Wind S. W.	At New Intake	10	56°	Clear	Heavy Traces.		None	0.011	0.13	24	24	Alk.	840	24	24	33%	40%	3:1	1:1	
	32		" "	50	42°	"	None		"	0.008	0.12	24	24	Acid	41	24	24	None	None	None	None	
	33	Had been blowing from this direction for several days.	¼ mile East Country Club	10	49°	"	Heavy Traces		Trace	0.010	0.10	24	24	"	3360	24	24	25%	33%	5:1	2:1	
	34		" " "	41	42°	"	" "		0.003	0.013	0.115	24	24	Alk.	34	48	24	None	20%	None	5:1	
	35	Clear.	1 mile South Whitefish Bay	10	45°	"	" "		None	0.014	0.115	24	24	"	12	24	24	"	100%	"	1:1	
	36		" " "	30	43°	"	" "		"	0.014	0.105	24	24	"	0	48	48	"	None	"	None	
August 15	G	Wind S. W.	Laboratory Tap E.			Clear	Heavy Traces.	None	0.005	0.016	0.11	24	24	2 Acid	64	24	24	None	50%	None	1:1	
	H	" "	Pumping Station			"	None	"	None	0.013	0.11	24	24	Alk.	52	24	24	"	None	"	None	
August 23	37	Cloudy.	Out from Gap	10		"	"		"	0.010	0.11	24	24	Acid	1176	24	24	60%		1:1		
	38		" " "	40		"	"		"	0.010	0.13	24	24	"	106	24	24	90%		1:1		
	39		Out from St. Francis	10	64°	"	"		"	0.012	0.11	24	24	"	282	24	24	50%		2:1		
	40		[illegible]	40	56°	"	[illegible]		[illegible]	0.010	0.11	24	24	"	95	24	24	85%		4:1		
	41		¼ mile out South Point	10	63°	"	"		"	0.012	0.11	24	24	"	918	24	24	90%		1:1		
	42		" " "	20	58°	"	"		"	0.012	0.125	24	24	"	840	24	24	50%		4:1		
September 12	43	Wind S. E. Clear after Galveston Storm.	½ mile out South end Government Pier	10		Sl. Turbid	None		0.003	0.008	0.15	24	24	Alk.	1800	24	24	50%	20%	1:1		
	44		" " " " "	30		"	"		None	0.008	0.145	24	24	"	1320	24	24	50%	50%	1:1	1:1	
	45		¼ mile out Old Intake	10		"	"		0.003	0.014	0.145	24	24	"	720	24	24	50%	33%	1:1		
	46		" "	24		"	"		None	0.012	0.145	24	24	"	780	24	24	50%	33%	1:1		
	47		Over New Intake	10		"	"		0.003	0.011	0.12	24	24	Acid	20	24	24	None	20%	None	Trace	
	48		" " "	50		"	"		None	0.015	0.125	24	24	"	50	24	24	33%	50%	1:1	1:1	
September 26	I	Wind S. E. Clear.	Laboratory Tap			Clear	None	None	None	0.014	0.10	24	24	Alk	25	24	24	25%	15%	3:1	Trace	
October 4	49		4 rods East S. end Government Pier	10	55°		"	"	0.010	0.008	0.125	24	24	Acid	1350	24	24	25%	40%	2:1	1:1	
	50		" " " " "	20	49°		"		0.006	0.008	0.125	24	24	"	1092	24	24	50%	50%	2:1	2:1	
	51		¼ mile out from Gap	10	55°		"		0.004	0.014	0.20	24	24	"	780	24	24	50%	50%	1:1	2:1	
	52		" " "	25	48°		"		0.004	0.012	0.15	24	24	"	660	24	24	60%	50%	2:1	2:1	
	53	Not taken.																				
	54		¼ mile S. E. Old Crib	25	40°		"		None	0.010	0.15	24	24	Alk.	20	24	24	None	33%	None	4:1	
October 30	J		Laboratory Tap			Clear	Small Amount		Trace	0.012	0.12	24	24	Alk.	50	24	48	None	25%	None		
November 22	K		"			"	Large Amount	None	0.001	0.011	0.14	48	48	"	8	24	48	"	None	"	None	

Dept. of Health.

teria were present is accounted for by the fact that cultures could not be made until the water had been collected for several hours.

Samples (37-42) taken south from the sewer outlet show evidences of C. Com. contamination even as far as South Point.

Samples (43-48) were taken the day after the great storm which was the wind-up of the Galveston storm. This wind storm blew with great fury for many hours from the southwest, and it is unlikely that a more favorable storm for infecting the new intake could occur, and yet samples taken from a quarter of a mile east of the south end of the government pier showed no evidence of C. Com., nor did samples taken out from the old intake nor at the new intake.

The last samples taken (49-54) were taken October 4th, and of these five (only five were usable), two taken near the south end of the government pier and two taken a quarter of a mile straight out from the gap appeared to contain C. Com., while a single sample taken a half a mile southeast of the old crib was free from them.

As nearly as I can judge, then, the area where C. Com. were found is within a line running from off South Point northerly along the shore a short distance out from the lighthouse pier, thence to the south end of the government pier, and probably passing along the outer side of the breakwater and a short distance from it, including a considerable area just outside of the gap.

A number of interesting points may be brought out. It is well known that we have a current along our shore of the lake from north to south. This current is not reversed by storms of ordinary severity. There is also a current within the breakwater toward the flushing tunnel and produced by the pump there. This current has a tendency to draw the sewage which works out in a northerly direction toward the flushing tunnel and away from the line of the intake. The disintegrating action of the waves as well as the great dilution from so vast a body of water, are other factors more readily apparent.

If we look at it from a seasonal point of view, we find that the C. Com., as well as other gas producers, become more and more plentiful as the season advances, undoubtedly due to the more favorable temperature of the water for these forms of bacteria.

The direction of the wind also has much to do with the condition of the water. An east wind is accompanied by a pure condition of the surface water and contamination of the deep water, while a west wind

has the opposite effect, showing that the east wind pushing the surface of the water onto the shore brings back an undercurrent of impure shore water. This accounts for the turbid condition of the water after a prolonged east wind, as a considerable amount of sand is brought back by the undercurrent from the shore.

Samples taken from time to time from the laboratory tap and from the pumping station were invariably free from C. Com. The pumping station water is always apparently the purer of the two, showing that there is some bacterial activity while in the pipes, and this of course is to be expected.

Many of these points require further proof of their validity, and it is also evident that there are many other interesting facts which might be brought out from further observations. I am satisfied from what has been done, however, that the city water supply is in no danger of contamination from the sewage at Jones Island under any present conditions or as a result of even the heaviest storms.

MILK.

The necessity of securing pure milk is far greater than at first glance is apparent. We know now that if our large cities were supplied with only pure milk, thousands of children's lives would be saved annually.

It is only within the last two decades that physicians have appreciated the parallelism existing between impure milk and diarrhoeal diseases in children, but of late years this co-relation has been observed, and sanitarians have started to remedy the evil by endeavoring to secure purer milk, and as a result the deaths from these diseases, as well as the deaths of children under five years of age, are annually becoming less. But while the results of past labor in this direction have been very encouraging, they also serve to emphasize the fact that greater energy and care must be shown in the future.

Here in Milwaukee in 1892 the deaths of children under five years of age was 51.9% of the total deaths. In 1899 the rate had steadily decreased until it constituted only 40.1%, a decrease of nearly 12%. It is believed that systematic milk inspection had more to do with reducing this death rate than any other one cause. But notwithstanding these figures, which are certainly encouraging, the fact remains that there is still an appalling number of deaths from diarrhoea and in children under

five years of age, and that these deaths are in a large measure preventable.

From a financial standpoint, too, in a city which pays annually about $1,500,000 for its milk, the addition of from 10 to 25% of water or the abstraction of the same percentage of cream is no small item, still the financial part of it must always be considered as secondary to the sanitary part of milk inspection. This phase of the subject alone is so vast that only a few of the most important points in regard to it will be briefly mentioned.

The saying that "an ounce of prevention is worth a pound of cure," is no more applicable anywhere than in the milk business. It is at the source of supply, at the dairies, that the trouble usually begins, and unfortunately our jurisdiction does not extend to them, except to those few lying within the city limits.

There are probably in the neighborhood of 1,000 dairies supplying Milwaukee with milk, some of which are 50 miles from the city, and the owners of these dairies are "all sorts and conditions of men,"—some who try conscientiously to ship in a good quality of milk, others who are careless, ignorant and filthy, still others who are downright dishonest, but the worst of these is the man who is careless, ignorant and filthy. For care, extreme care, from the start to finish, is the *sine qua non* of pure milk. The dishonest man, if he be cleanly in his handling of the milk, can not do half the damage with his watering and skimming that the other can with his filth. Such a one may milk a dirty cow into a dirty pail in a dirty stable, and pour the milk into dirty cans and take the cans to the station without sufficiently cooling the milk, and as a result there is an immediate and enormous growth of bacteria and often a consequent production of poisonous ptomaines.

A story was brought into the laboratory the other day to the effect that a certain shipper, when he received his cans back, was obliged to stand off out of smelling distance and wash the cans out with a hose. I can not vouch for the truth of this, but I can readily believe it, and I can also believe that when this man had finished operation with the hose, he considered that his duty was done so far as cleaning those cans was concerned. Of course, this is an extreme case. Many farmers try conscientiously to supply good milk, but there are none, not even the best, but might improve on their methods if they understood the bacteriology of milk.

In a word, it may be said that the science of handling milk, from a sanitary standpoint, is to keep as many bacteria out of the milk as possible, and to prevent those that do get in it from developing. To accomplish this requires two things,—1st, cleanliness; 2d, cold. Neither of these requirements are beyond the reach of milk dealers, and any one who is unwilling to provide these necessities should be debarred from supplying milk to the public.

It is well known that the germs, having once entered the milk and the ptomaines having been formed, no sterilization by heat nor antiseptics will destroy them. They are there to stay, but milk men endeavor either to offset the lack of cleanliness or to make up for the non-use of ice by the use of preservatives to keep the milk sweet, and these have been proven by careful observers to be harmful to digestion, particularly in infants. And what is of hardly less importance is the fact that the milk men, relying on the sweetening qualities of their preservatives, feel at liberty to be still more filthy in handling the milk.

Adulteration by water, if the water be pure, produces a financial loss, or perhaps when used as infants' food, a partial starvation of the infants, owing to a too great decrease in the fats or sugars.

If the water which is used as an adulterant be impure, however, as is apt to be the case, the impurity is imparted to the milk, and the danger which would have attached to drinking the water is exaggerated in drinking the milk. Many epidemics of typhoid have been traced to this source, and undoubtedly many intestinal diseases produced by the colon bacillus or allied fecal bacilli have their origin in watered milk.

Taking up more particularly the fat content of milk, as delivered in the city, it appears that the following conditions have more or less influence on it, according to circumstances:

1st: Breed. Many Holsteins give milk testing below 3.0% butter fat. In testing two samples from individual cows recently, and the samples were probably fairly taken, it was found that they tested only 2.0% each. From the same herd another Holstein tested 2.1%, as did also a red poll. None of these cows gave a large flow of milk, so their owner concluded that he was losing money in keeping them. But many farmers who supply Milwaukee with milk keep Holsteins on account of their large flow of milk, knowing that their milk nearly always tests low.

2nd: The milk sent to the city in March and April, when a lot of new cows have been "coming in," always averages less than usual, and

there is an increase in the number of milkmen having milk below the standard. The milk gradually improves in richness as the time from calving increases.

3rd: The first new pasture in May produces a dropping off in the quantity of fat for a week or two. Why this is I do not know, but the drying up of the pastures and the advent of flies produces a lowering of the fat content which is more obvious. It produces a shortage in the quantity of milk which must be eked out by the pump; for milkmen who do not ordinarily water their milk will do so when the milk supply runs short, in order to supply all their customers.

4th: Improper mixing of milk. It is not unusual to test two cans of milk belonging to one milkman, one of which will show 4.5% of fat, while the other may contain 3.0% or less.

5th. The accidental skimming of milk by pouring off the top after the can or receptacle has been standing for some time. This is particularly common in stores.

6th: The intentional skimming of milk.

In and around the city we have to contend with the feeding of distillery slops, with the housing of cattle in small, poorly ventilated stables which are without yards, and the cattle get little or no exercise from one year's end to the other, and with cases where the milkman has one or another contagious disease in his family, and is consequently liable to expose a whole community to the disease.

Altogether the subject is a complex one, and so much needs to be done that the outlook seems rather hopeless; but if private citizens would co-operate with the authorities, if legislative bodies would give the authorities more jurisdiction, and if the authorities were allowed to employ men enough to make even a semblance of doing what ought to be done, the money saved in funeral expenses alone would be a sufficient recompense for it all.

The first step toward a reform in this matter is education. As has been said, the sanitary handling of milk involves some knowledge of bacteriology, and in one way or another this knowledge must be brought to the dealers. We may briefly mention what is being done in some cities, and what might be done toward securing pure milk:

1st: Some cities require that all cows whose milk goes to supply the public shall have been tested with tuberculin, as a preventative measure against the germs of consumption.

2nd: At least one city has a municipal milk farm and laboratory, and is able to furnish for infants' use a supply of pure milk.

3rd: The judges of municipal courts are taking a special interest in the pure milk crusade, and have aided in a remarkable degree the work of the inspectors.

4th: Some cities require that all milk on sale shall be below a certain temperature, this temperature being fixed below that at which most bacteria develop.

5th: A quantitative bacterial test is made in some cities. This test shows whether the milking was done in a cleanly manner, and if the milk was subsequently kept at a low temperature.

6th: Cities should have supervision over all cows, stables, utensils, etc., which go to supply the city, even if they are situated a long distance from the city, and they should have the authority to keep out any milk that is unwholesome.

7th: Inspectors should have sufficient authority to prevent flagrant violations of sanitary laws, without delay for legal proceedings.

8th: All those whose knowledge or inclination does not impel them to conduct their business in a sanitary manner should be excluded from the milk business entirely. This would shut out many stores.

9th: It should be remembered that extra care would require extra expense, and as a result it might be necessary for the milkman to charge more for his milk in order to make a fair profit. Every one should be willing to pay a little more to get a better quality of milk. It is a cheap article of food, even if we pay more for it than we usually do.

10th: The milk business as carried on in large cities is not conducted economically. It was estimated a couple of years ago that if a syndicate could control half of the milk supply of Milwaukee, it could save $75,000 annually on delivery alone. It is therefore probable that if the supply could be controlled by men who have the technical knowledge to obtain pure milk, they might also find it was financially profitable as well.

CHEMICAL ANALYSES, 1899-1900.

	1899.	1900.
Milk	6,318	5,614
Cream	276	908
Lake water	18	72
Well water	120	155
Miscellaneous	67	25
Total	6,799	6,774

BACTERIOLOGICAL AND MICROSCOPICAL EXAMINATIONS, 1899-1900.

	1899.	1900.
Diphtheria	162	417
Sputum	47	65
Typhoid (Widal test)	31	58
Lake water	00	64
Miscellaneous	29	34
Total	269	638

Respectfully submitted,

W. C. BENNETT, M. D.,
Analyst.

REPORT

OF

CHIEF SANITARY INSPECTOR.

REPORT OF CHIEF SANITARY INSPECTOR.

F. M. Schulz, M. D., Commissioner of Health:

DEAR SIR—I hereby submit my annual report of the work of the sanitary inspectors for the year ending April 16th, 1901.

The inspectors have made 24,188 complaint reports and re-inspections, 215 stable reports, and 1,716 citizens' complaints, of which 1,279 were verified, 437 were dismissed as being without cause or on account of the nuisance having been abated.

Based on these reports of the inspectors, there have been issued 5,198 orders.

During the past year the department has examined 5,317 samples of milk collected by the inspectors, and 297 samples brought in by private parties, 227 samples of water, 23 samples of meat, and 20 samples of other food products.

The house-to-house and block-to-block inspections have been continued during the year.

All funerals of victims of diphtheria and scarlet fever have been attended by an inspector, who enforced the rule of the department, that all such funerals must be strictly private.

Eight horses afflicted with glanders have been killed and disposed of, and the stables cleaned and disinfected under the supervision of the department.

The meat and food inspectors have confiscated 221 calves, 22,532 pounds of other meats and fish, 28,522 pounds of nuts, fruits and vegetables, also several cases of poisonous cheese, which were examined and destroyed.

The fierce rivalry between the ice companies will probably prevent the cutting of the ice in the Milwaukee river above North avenue in the future, where it is permissible under the existing ordinances, and there is slight danger of impure ice from the inland lakes.

The new ordinances prohibiting the building of privy vaults on any lot fronting on a street in which water and sewer has been laid, and compelling all privy vaults to be water-tight, will enable the department to cause the removal of most of the vaults in the older parts of the city.

There were four prosecutions brought before the Municipal Court for failure to obey orders of the department; two of these were dismissed upon payment of costs, the orders having been complied with, one was fined and one discharged. In addition, 26 were fined $25.00 each and costs; 25 had sentence suspended on payment of costs, for selling impure milk.

The following table gives the inspection districts into which the city is divided, and the number of the various kinds of the orders issued during the year:

ORDERS PERTAINING TO BAKERIES.

Clean bake shop	2
Clean burned bakery	1
Clean floor	1
Clean rising boards or tables	1
Enclose or remove water closet	2
Extend chimney	2
Plaster bake shop	4
Provide catch basin	3
Provide cellar drainer	2
Provide cement or hardwood floor	13
Provide roof for basement entrance	1
Remove bedroom	1
Whitewash bake shop	6

BUTCHER SHOPS.

Clean butcher's offal from yard	1
Provide cement floor	1
Reline ice box	1

ORDERS PERTAINING TO BARNS.

Clean barns	14
Clean cows	2
Clean cow yard	1
Connect barn to sewer	13
Connect barn to tank	1
Disinfect barn	2

Keep barn clean	4
Provide new floor for stable	4
Provide new gutter	1
Ventilate cow and livery barn	8
Whitewash barn	21

ORDERS PERTAINING TO PLUMBING, ETC.

A.

Clean sewer	47
Connect cistern	4
Connect catch basin	2
Connect ice box	6
Connect roof conductors	12
Connect sink	8
Provide sewer	8
Repair and relay sewer	19
Seal sewer	4

B.

Clean sink and water pipe	4
Disconnect sink	1
Provide anti-syphonic trap	1
Provide sink	1
Remove sink	2
Renew woodwork of sink	4
Repair sink	1
Repair sink water pipe	9
Trap sink	20
Ventilate sink	1

C.

Clean slop hopper	2
Provide slop hopper	3
Remove slop hopper	3
Repair slop hopper	3
Use slop hopper	1

D.

Clean water closet	66
Disconnect water closet	1
Disinfect water closet	1
Provide light and ventilation for water closet	2
Provide water closet	653
Provide water for water closet	29
Remove pan closet	8

Renew water closet	5
Renew woodwork of water closet	1
Repair water closet	23
Seal water closet	7
Unlock water closet	2

E.

Clean catch basin	9
Provide catch basin	24
Repair catch basin	1
Trap catch basin	2

F.

Provide backwater trap	1
Provide iron conductors	1
Provide water	6
Remove latrines	1
Renew plumbing	4
Repair cellar drainer	1
Repair gas pipe	2
Repair plumbing	170
Repair vent pipe	2
Repair water pipe	7
Trap cistern	1

ORDERS PERTAINING TO VAULTS AND URINALS.

A.

Clean vault	2097
Disconnect vault from sewer	1
Disinfect vault	16
Fill vault	914
Provide water-tight vault	12
Remove vault from alley	2
Remove vault from lot line	1
Remove imitation vault	1
Repair vault	4

B.

Clean urinal	2
Connect urinal	1
Disinfect urinal	1
Provide urinal	2
Remove urinal	3
Repair urinal	2

ORDERS TO CEASE COMMITTING NUISANCE.

Cease burning hides and scrapings	1
Cease cutting ice	1
Cease contaminating river by tar and oil	1
Cease draining fish barrel on sidewalk	1
Cease drying grain	1
Cease dumping tannery refuse	8
Cease feeding dogs on garbage	1
Cease feeding horses in front of house	2
Cease killing poultry in yard	1
Cease selling milk	2
Cease storing game and fish in basement	1
Cease throwing slops and waste water in alley	5
Cease throwing slops in yard	5
Cease throwing slops on roof	5
Cease throwing manure	3
Cease using basement for privy vault	1
Cease using dilapidated barn	1
Cease using well	2

ORDERS PERTAINING TO GARBAGE AND MANURE NUISANCES.

A.

Clean garbage box	4
Clean garbage chute	2
Disinfect garbage box	4
Provide ash box	85
Provide cover for garbage box	7
Provide garbage box	301
Provide door for garbage box	1
Remove garbage box	2
Removed mixed garbage	33
Unlock garbage box	1

B.

Provide manure box	130
Provide cover for manure box	7
Remove manure	138
Remove manure box	3
Repair manure box	8

MISCELLANEOUS ORDERS.

Bank house	5
Boil water before using	32
Clean alley	20

Clean and disinfect track	1
Clean and disinfect floor	6
Clean and fill cistern	43
Clean and lock house and shed	2
Clean and repair eave gutters and conductors	2
Clean basement cellar and premises	45
Clean cistern	10
Clean chimney	2
Clean cold air box and screen it	1
Clean dry well	2
Clean floor	5
Clean pen for poultry	9
Clean shed	1
Clean stairs	1
Clean well	2
Clean yard	93
Confine pigeons	6
Confine poultry	4
Cover cistern	12
Cover well	1
Disinfect basement	3
Disinfect chute	1
Disinfect under sidewalk	1
Drain basement and cellar	8
Enclose barrel yard	1
Extend chimney	2
Fill cess pool	7
Fill cistern	21
Fill ditch	2
Fill or drain lot	11
Fill under floor with clean earth	1
Fill well	126
Filter water before using	2
Plank yard	3
Provide cistern	1
Provide eave gutters for house or barn	6
Provide galvanized iron chute	2
Provide sky lights for water closet	1
Provide tight wagon box	1
Provide wagon covers	8
Remove bones	1
Remove cat	1
Remove carload of bones	2
Remove carload of offensive grain	6
Remove chute	1

Remove cistern	17
Remove clothes	1
Remove dead rat	2
Remove dead trees	11
Remove filth from floor	1
Remove rubbish and ashes	64
Remove goat	2
Remove horse from basement	2
Remove night soil	2
Remove offensive barrels	3
Remove or cover 19 carloads of garbage	1
Remove or cover hay	1
Remove or cover hops	1
Remove pail	1
Remove pigeons	2
Remove poultry	20
Remove poultry coop	2
Remove privy	2
Remove rags	4
Remove shed	2
Remove tannery refuse	1
Remove wooden drain	11
Renew basement	2
Renew chute	2
Renew cistern	2
Renew floor	4
Repair basement	6
Repair cistern	5
Repair chimney	1
Repair floor	3
Repair floor in beamhouse	1
Repair privy	6
Repair roof	3
Repair roof conductors	27
Repair sidewalk	2
Repair stairs	1
Repair ventilating shaft	1
Repair wall	2
Replace privy	3
Show cause	1
Use smokeless fuel for engine	2
Ventilate water closet	1

Respectfully submitted,

TRUMAN H. CURTIS,

Chief Sanitary Inspector.

REPORT

OF

SECRETARY.

REPORT OF SECRETARY.

MILWAUKEE, January 1, 1901.

F. M. Schulz, M. D., Commissioner of Health:

During the year some very important ordinances previously passed were strictly enforced, amongst them ordinance 6, passed January 15, 1900, which provided for abolishing privy vaults in all districts where sewer and water pipes were laid, so that this year 835 vaults were filled up, against 155 in 1899, and 620 water closets provided, against 77 the year before.

The ordinance, Section 3, Chapter 103, amended May 8, 1899, has had a good effect, in that barns where two or more cows or more than four horses were kept must be provided with a sewer, and 84 barns were connected in 1900, against 42 in 1899.

Circulars were issued to physicians regarding quarantine, diagnosis and treatment of contagious disease and vaccination. Seven medical school inspectors were appointed on January 23 and continued to June 25, 1900, taken from civil service list.

On January 8 a sanitary police (T. Boutin) was added to the force of regular inspectors from list, and on April 2d T. J. Hannan, a sanitary inspector, was retired.

On February 26 the salary of Chief Inspector Curtis was raised to $1,200.00 per annum. For matters of work done under him, I have to refer to his report, and for other branches of the service to reports of Dr. Bennett and Dr. Coon.

Appended find statements in relation to schools, confiscations of meats and fish, fruits and vegetables and milk, and prosecutions for violations of ordinances.

BUSINESS REPORT OF THE HEALTH DEPARTMENT FOR 1900.

	1900.	1899.
No. complaints entered	6,758	6,764
General	4,607	4,990
Citizens'	1,643	1,487
Verbal	508	287
No. inspectors' reports	22,371	19,826
No. orders issued by Commissioners	5,416	4,544
No. milk venders licensed	1,277	
No. milk venders gone out of business	58	
No. licenses renewed, since notification	27	
No. milk venders not renewed	5	
No. pounds of meat confiscated	20,834	33,064
Valued at	$1,278 29	$1,818 67
No. pounds of fruit and vegetables confiscated	28,350	31,445
Valued at	$167 55	$403 50
No. of privies cleaned, private	3,230	3,167
No. of privies cleaned, compulsory	1,994	1,396
All obeyed by 121, or 6%.		
No. of scavenger permits issued	5,224	4,563
Night soil removed, yards	12,189	10,278
Cost of removal of night soil	$36,567 00	$32,184 00
Public school house inspections	957	
Private school houses inspected	614	239
No. of school houses found defective	23	37
No. of bakeries and confectionaries inspected	654	1,412
No. of bakeries and confectionaries found defective	368	539
Still defective	31	22
No. of cow stables inspected	215	195
No. of cow stables found defective	42	84
No. vaults ordered filled	835	155
No. of orders to provide water closets (Ordinance 6)	620	77
No. sewer connections ordered	319	284
No. orders to fill wells	107	84
42 of which in connection with contagious diseases.		
References to Board of Public Works	103	131
References to School Board	23	20
References to State Factory Inspector	1	
References to District Attorney	1	1
References to Weed Commissioners	4	3
References to State Veterinary Surgeon	8	4
References to Superintendent of Sewers	1	
References to Food and Dairy Commissioners	3	1
References to Town Boards of Health	7	1
References to Water Department	2	4

References to Park Commissioners.....	2	2
References to Chief of Police.....	7	12
References to Building Inspector.....	4	4
References to Gas Light Company.....	2	
References to Fire Department.....	1	1
References to Associated Charities.....	1	1
Petitions of resident owners for sewer or water pipe..	5	3
Petition for abatement of nuisance caused by non-compliance with Ordinance 6 (relating to building of privy vaults), sent to Council June 4th. See Journal, page 243.		
Protests of residents against building of livery barns.	2	

PROSECUTIONS FOR VIOLATING CITY ORDINANCES.

Eleven cases, figures aggregate $111.00.

MILK PROSECUTIONS AND FINES.

Forty-seven prosecutions were made for selling impure milk and 49 warned.

In 27 cases fines were imposed aggregating $750.00.

In 19 cases costs were paid and one was acquitted out of the total 96 investigated.

Oct. 12th. A nuisance of non-resident owner was abated at No. 1429 Seventh street.

July 26th. Also at No. 1314 Fratney street, both charged against property.

Letters of warning to comply with orders after owners had had a call notice without effect were issued as follows:

For abatement of nuisances, 224, resulting in compliance with the the original orders in 60 cases; in extensions until spring, 1901, in 58 cases, leaving 106 orders to be enforced.

For cleaning of privy vaults 70 cautionary letters were sent out, of which number 25 are still disobeyed, one extended and 44 complied with.

For making sewer connections letters of warning were sent out in 28 cases, but only 6 cases complied with, leaving 22 open for prosecution; 62 orders were extended till spring, 1901, while of the remaining 229 orders for sewers issued this year, 142 were made. Sixty-five of the letters above referred to contained warning of several disobeyed orders to the same party.

REFERENCES OF PUBLIC SCHOOL HOUSE DEFECTS TO SCHOOL BOARD.

Jan. 18. Nineteenth District, Twenty-third and Walnut.
30. Nineteenth District, Twenty-third and Walnut.
Feb. 8. Eighth District Primary, Second avenue and Madison.

Mch.	3.	Fifteenth District, Cold Spring avenue and Twentieth street.
	10.	Nineteenth District Primary, Twenty-third and Walnut.
	15.	Eighteenth District, Prospect and Maryland avenue.
	16.	Sixth District, Garfield avenue and Fourth street.
	24.	Sixteenth District, Eighteenth and Cedar.
	26.	Seventeenth District, Dover and Kinnickinnic avenue.
	30.	Thirteenth District Primary No. 2, Christine Lane and Fifth street.
April	6.	Twentieth District, Twenty-second and Center.
		South Division High, Lapham and Eighth avenue.
	23.	Twenty-first District No. 2, Ring and Ninth street.
May	4.	Seventeenth District Primary, Trowbridge and Delaware avenues.
	17.	Thirteenth District, First and Center.
June	2.	Nineteenth District, Walnut and Twenty-third street.
	4.	Nineteenth District, Walnut and Twenty-third street.
		Seventeenth District, Trowbridge and Delaware.
	6.	Seventeenth District, Dover and Kinnickinnic.
Oct.	9.	Nineteenth District, Thirty-first and Brown.
	15.	Thirteenth District Primary No. 1, Lee and Weil.
Nov.	9.	School for the Deaf, Seventh and Prairie streets.
	17.	Seventh District, Jefferson street.
	23.	Seventeenth Primary, Trowbridge and Delaware.

PAROCHIAL SCHOOLS.

		St. John's School, Court and Fourth streets.
Feb.	9.	St. Mary's School, Milwaukee and Biddle.
Nov.	17.	Emmaus School, Hadley and Twenty-third street.
	19.	Sharon's school, Twenty-eighth and Hadley.

Totals—Public, 23; private, 4.

TABLE

Showing reports made by each of the twelve Sanitary Inspectors.

NAME.	No.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
H. Kiehl	103	81	70	78	67	133	114	126	100	152	139	171	186	1 417
J. A. Osmunson	104	86	62	82	129	241	220	204	174	244	196	140	115	1,893
J. F. Cunningham	105	62	57	47	69	112	73	115	117	135	98	148	141	1,174
E. Seaman	106	174	93	182	162	254	245	290	362	194	242	283	206	2,687
W. Fremont	108	174	42	75	86	263	191	280	267	253	223	251	148	2,253
T. J. Hannan	109	79	73	90	9	.....	.....	.....	.....	.....	.....	.....	.....	251
C. F. Kruckenberg	110	139	74	67	175	297	276	313	481	461	283	516	370	3 452
Jacob H. Schultz	111	51	42	24	46	72	42	28	45	57	60	47	105	619
P. J. King	112	150	168	124	142	187	188	203	214	235	148	173	162	2 194
J. Campbell	113	103	38	37	113	174	151	224	207	251	183	176	177	1,834
O. Klein	116	106	64	62	196	276	248	271	393	326	311	163	167	2,493
T. Boutin	117	.....	68	100	111	243	246	255	245	192	203	234	207	2,104
		1,205	851	968	1,215	2,352	1,994	2,309	2,605	2,500	2,086	2,302	1,984	22 371

No. 111 was employed as special inspector of bakeries and confectioneries.
No. 109 left the service April 2nd.
No. 117 was appointed January 8th.

TABLE

Showing reports made by each of the four Meat Inspectors.

NAME.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Carney	13	4	3	5	6	8	9	6	15	7	2	5	83
Falbe	15	9	20	23	12	12	15	11	7	10	4	14	152
Stock	19	.....	4	7	14	12	10	6	8	16	10	12	118
McGrath	15	5	7	12	18	5	11	22	13	8	9	5	130
	62	18	34	47	50	37	45	45	43	41	25	36	483

Number of confiscations of vegetables and fruits	14
Number of confiscations of meats and fish	188
Total	202

Following is a statement showing by wards the number of typhoid fever cases reported to this office, of the inspectors' reports on the condition of premises affected, of the orders issued to owners and occupants for the abatement of the nuisances therein; also the number of vaults ordered cleaned and disinfected with copperas, and the number of orders disobeyed:

First Ward—

Good sanitary condition in 4 cases.
Order to clean and disinfect vault, 1.
Order to abate nuisance, 1. All obeyed.
Total cases, 6.

Second Ward—

Good sanitary condition in 6 cases.
Orders to abate nuisance, 4. All obeyed.
Total cases, 10.

Third Ward—

Good sanitary condition in 4 cases.
Total cases, 4.

Fourth Ward—

Good sanitary condition in 6 cases.
Orders to clean and disinfect vaults, 3. All obeyed.
Total cases, 9.

Fifth Ward—

Good sanitary condition in 7 cases.
Orders to clean vaults, 3.
Orders to abate nuisances, 3.
Total cases, 13.

Sixth Ward—

Good sanitary condition in 11 cases.
Orders to abate nuisances, 2.
Total cases, 13.

Seventh Ward—

All in sanitary condition.
Total cases, 2.

Eighth Ward—

Good sanitary condition in 6 cases.
Orders to clean vault, 1.
Orders to fill well, 4.
Orders to abate other nuisances. All complied with.
Total cases, 11.

Ninth Ward—

Good sanitary condition in 18 cases.
Orders to clean vaults, 13.
Orders to fill wells, 4. All complied with.
Total cases, 35.

Tenth Ward—

Good sanitary condition in 14 cases.
Orders to clean vaults, 4.
Orders to fill wells, 2. Not obeyed, 2.
Total cases, 20.

Eleventh Ward—

Good sanitary condition in 9 cases.
Orders to clean vaults, 4.
Orders to fill wells, 6. Not obeyed, 3.
Total cases, 19.

Twelfth Ward—

Good sanitary condition in 4 cases.
Orders to clean vaults, 10.
Orders to fill wells, 7. Not obeyed, 4.
Total cases, 21.

Thirteenth Ward—

Good sanitary condition in 7 cases.
Order to fill well, 1. Not obeyed.
Total cases, 8.

Fourteenth Ward—

Good sanitary condition in 5 cases.
Orders to clean vaults and fill well, 16. Not obeyed, 5.
Orders to abate other nuisances, 3. All complied with.
Total cases, 29.

Fifteenth Ward—

Good sanitary condition in 11 cases.
Orders to clean vaults, 4. All complied with.
Orders to fill wells, 2. Not obeyed.
Total cases, 17.

Sixteenth Ward—

Good sanitary condition in 12 cases.
Order to clean vaults, 1. Not obeyed.
General order, 1. Obeyed.
Total cases, 14.

Seventeenth Ward—

Good sanitary condition in 2 cases.
Orders to clean vaults and fill well, 10. Not obeyed, 1.
General orders issued, 4. Not obeyed, 3.
Total cases, 19.

Eighteenth Ward—

Good sanitary condition in 14 cases.
Orders to clean vaults, 2.
Order to fill well, 1. Not obeyed.
Orders to abate nuisances, 2.
Total cases, 19.

Nineteenth Ward—

Good sanitary condition in 39 cases.
Orders to clean vaults, 8.
Order to fill well, 1. Not obeyed.
Orders to abate nuisances, 6. Not obeyed, 1.
Total cases, 54.

Twentieth Ward—

Good sanitary condition in 2 cases.
Orders to clean vaults, 4.
Orders to fill wells, 4.
Orders to bate nuisances, 2.
Total cases, 12.

Twenty-first Ward—

Good sanitary condition in 1 case.
Total cases, 1.

The following is a statement of expenditures for the Health Department for salaries, wages and supplies for the year 1900:

Jan.	15.	H. H. West Co., blank books	$66 25
		H. H. West Co., blank books	64 75
		H. H. West Co., blank books	9 09
	26.	J. F. Cunningham, car fare and sample	5 50
		Harry Kiehl, car fare and sample	5 50
		Tillie Haeusler, services	6 50
		Wisconsin Training School	13 00
Feb.	1.	F. M. Schulz et al., January pay roll	2,369 89
		J. C. Wehrman et al., January pay roll	86 66
		F. Schnackenberg et al., January pay roll	4,467 50
		L. J. Daniels et al., January pay roll	157 86
		Jac. Stoll et al., January pay roll	206 00
	12.	J. V. Allcott, groceries	10 47
		Jno. F. Burnham, January rent	300 00
		Cream City Woven Wire Works, spatulas	5 50
		Grand Union Tea Co., groceries	3 50
		F. Hesse, groceries	34 79
		W. Meyer & Son, livery	26 00
		Chas. Moedinger, meats	16 23
		Hy. Mollerus Co., oil	6 89

Feb.	12.	F. Reiske, milk	12 85
		Schwab Stamp & Seal Co., rubber stamp	35
		A. Spiegel Co., medicine	17 08
		A. Spiegel Co., supplies	59 60
		H. H. West Co.	2 00
	26.	Park Davis Co., anti-toxine	15 87
		Park Davis Co., anti-toxine	85 60
		F. M. Schulz, sundries	3 07
		Philadelphia & Reading Coal Co., coal	2 50
		B. Uhrig Coal Co., coal	70 07
		B. Uhrig Coal Co., wood	4 00
Mch.	1.	F. M. Schulz et al., February pay roll	2,436 55
		J. C. Wehrman et al., February pay roll	86 66
		F. Schnackenberg et al., February pay roll	3,887 00
		Jac. Stoll et al., February pay roll	198 00
		L. J. Daniels et al., February pay roll	350 00
		Wisconsin Training School for Nurses, nurse at Isolation Hospital	20 00
		Wisconsin Training School for Nurses, nurse at Isolation Hospital	40 00
		Tillie Haisler	11 50
		J. V. Allcott	13 05
		J. H. Burnham, February rent	300 00
		Theo. Habhegger, repairs	18 85
		F. Hesse, groceries	35 20
		Ed. Keogh	4 50
		Ed. Keogh	107 55
		Chas. Moedinger, meats	24 46
		F. Reiske, milk	15 45
		A. Spiegel Co., supplies	71 18
		A. Spiegel Co., medicines	20 50
		Wisconsin Telephone Co., telephone service	44 50
		H. H. West Co.	16 66
	26.	Geo. Brumder, books	10 00
		Eriner & Amend, tubes, etc	8 44
		Ph. Gross Hardware Co., hardware	5 32
		H. Heyn, dry goods	19 53
		W. F. Keener Co., book	3 00
		Wm. Meyer & Son, livery hire	20 00
		D. A. Milbrath, repairing ambulance	45 00
		Ph. Murphy & Co., repairing plumbing	17 68
		C. L. Roloff, brooms	2 50
April	1.	F. M. Schulz et al., March pay roll	2,458 31
		J. C. Wehrman et al., March pay roll	86 66
		F. Schnackenberg et al., March pay roll	5,273 62

April	1.	Jas. Stoll et al., March pay roll	210 75
		L. J. Daniels et al, March pay roll	350 00
	9.	John F. Burnham, rent for March	300 00
		B. Uhrig Coal Co., coal	175 32
		H. H. West Co.	11 50
	23.	J. V. Allcott, groceries	7 07
		Geo. Burroughs, inspectors' cases	24 00
		Cream City Woven Wire Works, wood	9 00
		E. T. Doyn, repair plumbing	21 15
		Theo. Habhegger, repairs	6 40
		F. Hesse, groceries	33 41
		F. W. Keller & Son, spatulas	2 50
		Milwaukee Gas Light Co., coke	3 04
		Milwaukee Gas Light Co., gas	4 90
		Milwaukee Oil Specialty Co., oil	9 54
		Ph. Murphy Co., repairs	7 31
		Chas. Moedinger, meats	18 98
		Philadelphia & Reading Coal Co., coal	2 50
		F. Reiske, milk	12 60
		Speich Stove Repair Co., repairs	10 35
		A. Spiegel Co., disinfectants	53 70
		A. Spiegel Co., spatulas	42 80
		F. M. Schulz, freight, etc	3 52
		H. H. West Co.	4 50
		H. H. West Co.	37 92
		H. H. West Co.	8 00
May	1.	F. M. Schulz et al., April pay roll	2,403 77
		J. C. Wehrman et al., April pay roll	86 66
		L. J. Daniels et al., April pay roll	350 00
		F. Schnackenberg et al., April pay roll	4,976 78
		Jac. Stoll et al., April pay roll	206 25
	7.	John F. Burnham, rent for April	300 00
		Henry Klein, labor	23 25
		Wm. Meyer & Son, livery	28 00
		A. Spiegel Co.	17 05
		A. Spiegel Co.	12 45
	14.	Bertha Dillon, services, two days in March	2 00
		Minnie Geese, services, Jan. 15 to April 8	27 00
		Tillie Haeusler, services, March 1 to April 20	14 00
		Wisconsin Training School for Nurses, nurse in March	20 00
	21.	H. H. West	34 17
		H. H. West	37 00
		J. V. Allcott, groceries	24 06
		American Supply Co., copperas	7 13
		American Supply Co., oil	9 27

May	21.	Chas. Dunkel, burying horse	3 00
		T. Habhegger, repairs	4 95
		F. Hesse, groceries	33 71
		C. Moedinger, meat	18 63
		W. W. Fuel Co., coal	101 25
		F. Reiske, milk	13 60
		A. Spiegel Co., formaline, etc	78 28
		A. Spiegel Co., formaline, etc	60 18
		A. Spiegel Co., medicine	13 07
June	1.	F. M. Schulz et al., May pay roll	2,394 89
		J. C. Wehrman et al., May pay roll	86 66
		L. J. Daniels et al., May pay roll	350 00
		F. Schnackenberg et al., May pay roll	5,244 14
		J. Stoll et al., May pay roll	210 75
	4.	American Supply Co., paint	52 50
		J. F. Burnham, May rent	300 00
		Grand Union Tea Co., groceries	7 25
		Hecht & Zummach, oil	2 70
		Hecht & Zummach, oil	5 30
		W. C. Hoya, gloves	3 75
		C. W. Fischer estate, chairs	22 50
		Julius Lando, thermometer	3 00
		Library Bureau, cards	19 50
		L. A. Meyer Co., key	25
		D. A. Milbrath, repairs	1 50
		Ozonet Co., ozonet	3 50
		Richards & Co., tubes	4 13
		Solomon & Koepp, curtains	6 75
		F. M. Schulz, express	1 52
		Wisconsin Telephone Co., telephone	44 50
	25.	Wisconsin Training School, April nursing	17 42
		Edw. Fischer Co., books destroyed	2 66
		F. Hildebrandt, making pit	150 00
		F. M. Schulz et al., June pay roll	2,394 89
		J. C. Wehrman et al., June pay roll	86 66
		L. J. Daniels et al., June pay roll	350 00
		F. Schnackenberg et al., June pay roll	5,874 27
		Jac. Stoll et al., June pay roll	210 00
		Phil. Gross, hardware	11 20
		F. Hesse, groceries	43 60
		H. Irmer et al., labor	7 18
		W. Meyer & Son, livery	31 00
July	2.	W. Meyer & Son, livery	43 00
		Chas. Moedinger, meat	22 29
		F. Reiske, milk	19 30

July	2.	A. Spiegel Co., medicine	17 30
		H. H. West Co	55 91
		H. H. West Co	20 50
		H. H. West Co	11 50
		J. F. Burnham, June rent	300 00
	16.	T. Habhegger, repairs	3 65
		F. Hesse, groceries	38 59
		Chas. Moedinger, meat	22 42
		F. Reiske, milk	19 45
		A. Spiegel Co., formaline and sulphur	22 38
		F. M. Schulz, expenses to Atlantic City	100 00
	24.	Tillie Lebuc, services	9 00
		Tillie Heisler, services	15 00
		Trinity Hospital, services	22 67
		Selma Braun, services	22 50
		Chas. Nimmer, meat to Mequon	12 41
	30.	J. V. Allcott, groceries	25 96
		Geo. Brumder, book	10 00
		C. Eisfeld Co., glassware	8 25
		Espenhain Dry Goods Co., dry goods	3 46
		Herman Heyn, linen, etc	8 77
		Milwaukee Gas Light Co., gas	2 64
		A. Spiegel Co., drugs	4 10
		A. Spiegel Co., drugs	11 00
		Chas. Stolper Cooperage Co., repair barrels	84 75
		South sewerage fund, flushing sewer	3 00
		A. G. Wright, directories	15 00
		H. H. West Co., bunting	21 00
Aug.	2.	F. M. Schulz et al., July pay roll	2,394 89
		J. C. Wehrman et al., July pay roll	86 66
		F. Schnackenberg et al., July pay roll	6,325 33
		Jac. Stoll et al., July pay roll	227 25
		Selma Braun et al., July pay roll	12 85
	13.	Coogan & Strothenke, plumbing	12 36
		G. Hildebrandt, groceries	4 97
		G. Hildebrandt, groceries	36 45
		W. C. Hoya, instruments	4 10
		Lemke & Buehner, book	10 50
		Chas. Moedinger, meat	12 91
		Ph. Murphy Co., plumbing	1 13
		F. Reiske, milk	10 75
		A. Spiegel Co., drugs	51 68
		Chas. Stolper Co., repair barrels	30 00
		Wisconsin Lakes Ice Co., ice	10 00
		H. H. West Co	21 17

Aug.	13.	J. F. Burnham, rent	300 00
	21.	Wisconsin Training School, services	20 00
		Trinity Hospital, services	32 00
		F. R. Dengel Co., plumbing	14 85
		H. Hartman, care of H. Heyn, dry goods	2 30
Sept.	1.	Schulz et al., pay roll	2,394 89
		J. C. Wehrman et al., pay roll	86 66
		F. Schnackenberg et al., pay roll	6,921 84
		Jac. Stoll et al., pay roll	219 75
	24.	J. V. Allcott, groceries	11 89
		American Supply Co., kerosene	11 60
		American Supply Co., paint	53 00
		Bausch & Lomb Co., supplies	9 23
		J. F. Burnham, rent	300 00
		Theo. Habhegger,, repairs	10 95
		G. Hildebrandt, groceries	13 68
		Fred Hildebrandt, rent	100 00
		Alvin Martin, repairs	3 10
		Chas. Moedinger, meat	6 39
		R. L. Polk & Co., book	10 00
		F. Reiske, milk	4 90
		Schwab Stamp & Seal Co., stamps, etc	2 80
		A. Spiegel Co., drugs	16 70
		A. Spiegel Co., drugs	5 70
		South sewerage fund, connect sewer	23 69
		F. M. Schulz, express	4 66
		Willman Bros., letterheads	13 50
		Wisconsin Telephone Co., telephone	44 50
		H. H. West Co.	44 66
		Aug. Zillmer, teaming	5 20
Oct.	1.	F. M. Schulz et al., September pay roll	2,394 89
		J. C. Wehrman et al., September pay roll	86 66
		F. Schnackenberg et al., September pay roll	6,581 65
		J. Stoll et al., September pay roll	217 50
		A. Spiegel Co., formaldehyde	69 95
		Chas. Stolper Cooperage Co., barrels, etc	146 75
	22.	J. F. Burnham, rent	300 00
		Grand Union Tea Co., groceries	13 50
		Grand Union Tea Co., groceries	7 25
		H. Heyn, dry goods	3 77
		H. Heyn, dry goods	1 58
		F. Hildebrandt, rent	100 00
		Gus. Hildebrandt, groceries	32 87
		Chas. Moedinger, meat	11 71
		F. Reiske, milk	8 75

Oct.	22.	H. H. West Co	31 91
		H. H. West Co	17 66
		Wm. Bollow, stamps, etc	257 80
	26.	Tillie Haeusler, services	7 00
		Trinity Hospital, services	18 66
Nov.	1.	F. M. Schulz et al., October pay roll	2,394 89
		J. C. Wehrman et al., October pay roll	86 66
		F. Schnackenberg et al., October pay roll	6,344 87
		J. Stoll et al., October pay roll	219 75
	5.	J. F. Burnham, rent	300 00
		H. Heyn, dry goods	3 50
		F. Hildebrandt, rent	100 00
		Milwaukee Gas Light Co., gas	2 24
		A. Spiegel Co., drugs	3 30
		A. Spiegel Co., formaldehyde	61 78
		Jos. W. Simpson, coal	67 50
	19.	H. H. West Co	10 00
		H. H. West Co	23 25
		H. H. West Co	196 35
		Wm. Bollow, stamps, etc	35 20
Dec.	1.	F. M. Schulz et al., November pay roll	2,394 89
		J. C. Wehrman et al., November pay roll	99 16
		F. Schnackenberg et al., November pay roll	5,014 23
		Jac. Stoll et al., November pay roll	208 50
	3.	J. V. Allcott, groceries	24 80
		American Supply Co., kerosene	9 18
		Cream City Woven Wire Works, wood	3 50
		Cornish, Curtis & Greene, test bottles	263 00
		Chas. Dunkel, burying horses	9 00
		P. Engelbert, repairs	5 65
		Grand Union Tea Co., groceries	2 50
		Ph. Gross Hardware Co., hardware	5 35
		Ph. Gross Hardware Co., hardware	11 28
		G. Hildebrandt, groceries	8 35
		Library Bureau, cards	20 00
		H. Mooers Co., repairing heating apparatus	759 00
		F. Reiske, milk	6 25
		A. Spiegel Co., drugs	28 30
		A. Spiegel Co., drugs	2 40
		J. Schroeder, services	6 03
		F. M. Schulz, express	3 66
		Trinity Hospital, services	40 67
		J. Vibrink, services	14 45
		Wisconsin Telephone Co., telephone	44 50
	17.	J. V. Allcott, groceries	17 80

Dec. 17.	J. F. Burnham, rent	300 00
	Cream City Woven Wire Works, wood	3 50
	Chas. Dunkel, burying horses	9 00
	F. Hildebrandt, rent	100 00
	E. M. Katz, plates	1 32
	Chas. Moedinger, meat	10 59
	Chas. Moedinger, meat	19 04
	G. Hildebrandt, groceries	21 47
	F. Reiske, milk	10 45
	C. L. Roloff, brooms	3 60
	A. Spiegel Co., drugs	15 00
	A. Spiegel Co., drugs	16 35
	Trinity Hospital, services	20 00
	H. H. West Co.	31 17
31.	F. M. Schulz et al., December pay roll	2,394 89
	J. C. Wehrman et al., December pay roll	101 66
	F. Schnackenberg et al., December pay roll	4,086 78
	Jac. Stoll et al., December pay roll	208 50
	L. E. Grove et al., December pay roll	71 69
	J. F. Burnham, rent	300 00
	Chicago, Milwaukee & St. Paul Railway Co.	9 50
	Ph. Gross Hardware Co.	18 85
	L. H. Meyer Co., key	50
	Wm. Meyer & Sons, livery	45 00
	Wm. Meyer & Sons, livery	34 00
	Wm. Meyer & Sons, livery	44 00
	H. H. West Co.	9 50
	H. H. West Co.	25 59
	H. H. West Co.	1 75
	American Supply Co., kerosene	8 84
	J. V. Allcott, groceries	55 21
	Bausch & Lomb Co., supplies	5 63
	Wm. Bollow, stamps	19 00
	Grand Union Tea Co., groceries	4 75
	Theo. Habhegger, repairs	14 35
	G. Hildebrandt, groceries	28 81
	F. Hildebrandt, rent	100 00
	T. Karwina, services	15 00
	F. E. McGrath, meat	9 61
	Milwaukee Gas Light Co., gas	2 32
	Wm. Meyer & Son, livery	46 00
	Chas. Moedinger, meat	20 23
	Philadelphia & Reading Coal Co., coal	4 50
	J. Polzynski, teaming	35 10
	F. Reiske, milk	9 55

Dec. 31.	C. L. Roloff, brushes	1 90
	J. W. Simpson, coal	21 00
	J. W. Simpson, coal	28 00
	J. W. Simpson, coal	77 00
	R. Siewert, services	3 12
	F. M. Schulz, express	4 65
	Trinity Hospital, services	25 16
	E. M. Vogel, services	8 55
	Wisconsin Lakes Ice Co., ice	24 00
	Wisconsin Lakes Ice Co., ice	10 00
	H. H. West Co	31 67
	John R. Wolf, City Comptroller, supplies	146 42
	Total	$110,343 15

Respectfully submitted,

FRANK B. SCHUTZ,

Secretary.

Dr. F. M. Schulz, Commissioner of Health:

SIR—The following is a statement of the work done in the collection and disposal of garbage and in the collection of dead animals for the year 1900.

There were 29,893 single loads and 4,121½ double loads of garbage collected, and 4,583 small animals and 219 large animals collected and disposed of during the year.

The table below shows in detail the work done, the number of teams and laborers employed, and the amount of pay roll for each month:

MONTH.	Single Loads.	Double Loads.	Single Teams Employed.	Double Teams Employed.	Laborers Emp'oyed.	Pay Rolls Coll.& Dis. Garbage.	Pay Rolls Coll.& Dis. Dead Animals.
January	2,349	392	51	12	23	$4,467 50	$206 00
February	2,021	266	51	12	24	3,887 00	198 00
March	2,529	315	51	12	23	5,273 62	210 75
April	2,255	292½	52	12	22	4,976 78	206 25
May	2,229	325½	52	13	25	5,244 14	210 75
June	2,830	371	55	14	27	5,874 27	210 00
July	3,108	383	56	13	28	6,325 33	227 25
August	3,381	400½	58	14	33	6,921 84	219 75
September	3,036	401	59	15	34	6,581 65	217 50
October	2,609	383	58	15	35	6,344 87	219 75
November	1,934	342	57	15	36	5,014 23	208 50
December	1,614	250	57	14	37	4,086 78	208 50
	29,893	4,121½				$64,998 01	$2,543 00

The amount of garbage collected was..... 28.884 tons
Large and small animals..... 1.104 tons

Total ..... 29,988 tons

Respectfully submitted,

JAS. GRAHAM,
Supt. Collection and Disposal of Garbage.

ANNUAL REPORT

OF THE

Commissioner of Health

OF

MILWAUKEE.

(TWENTY-FIFTH ANNUAL REPORT OF THE DEPARTMENT.)

APRIL, 1902

MILWAUKEE:
THE EDW. KEOGH PRESS, 347-349 BROADWAY.
1902.

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1902.

OFFICERS AND EMPLOYES

OF THE

Health Department of the City of Milwaukee

FOR THE

YEAR ENDING APRIL 1st, 1902.

Commissioner of Health,

F. M. SCHULZ, PH. G. M. D.

Medical Assistants to Commissioner of Health,

ARTHUR J. PATEK, M. D., LOUIS F. JERMAIN, M. D.

GILBERT E. SEAMAN, M. D.,

CHARLES J. COFFEY, M. D., JAMES H. HACKETT, M. D.

Food Analyst,

W. C. BENNETT, M. D.

Registrar of Vital Statistics.

JOHN W. COON, M. D.

Secretary,

FRANK B. SCHUTZ.

Clerk,

E. W. DIERCKS.

Registration Clerk,

MISS BELLE REESE.

Confidential Secretary,

MISS HELEN WILSON.

Stenographer,

MISS N. H. TAYLOR.

OFFICERS AND EMPLOYES—Continued.

Sanitary Police,

T. H. Curtis, Chief Sanitary Inspector.

David Thomas, Chief of Disinfecting Corps.

G. E. Adams, Garbage Inspector.

F. J. Carney, Meat Inspector.

F. Falbe, Meat Inspector.

Phil. Stock, Meat Inspector.

Ed. McGrath, Meat Inspector.

H. Keihl,

J. O. Osmunson,

J. F. Cunningham,

E. Seaman,

W. Fremont,

C. J. Kruckenberg,

Jacob H. Schultz,

P. J. King,

J. Campbell,

J. M. Calligan,

O. E. Klein,

T. Boutin,

John Dolge.

Matron to City Isolation Hospital for Contagious Diseases.

Miss J. C. Wehrman.

Cook to City Isolation Hospital.

Sarah Haisler.

Janitor to City Isolation Hospital.

Mike Haisler.

COMMITTEE ON HEALTH

OF THE

BOARD OF ALDERMEN.

E. A. Wittig,

P. J. Grogan,

J. Maciolek,

Wm. Murphy,

W. H. Graebner,

Arthur A. McCormack,

Henry Laack.

REPORT.

To the Honorable the Mayor and Common Council of the City of Milwaukee:

GENTLEMEN—I have the honor to submit herewith for your consideration my report of the operations of this department, connecting therewith the reports transmitted to me by the Secretary, the Registrar of Vital Statistics, the Food Analyst, and of the Chief Sanitary Inspector, for the year ending April 15th, 1902, being the twenty-fifth annual report of this department.

As has been customary in former years the statistical and financial part of this report is made for the year ending Dec. 31, 1901, the remainder being for the year ending April 15, 1902.

The death rate for the year 1901 has, with one exception, (1898) been the lowest in the history of Milwaukee, and this city again upholds its former reputation as to its healthfulness. An annual mortality rate of 12.99 is very gratifying and is a record which cannot be equalled by any other city of its size.

The total number of births reported for the year 1901 was 7,415 as against 7,492 for 1900; of this number 3,749 were males and 3,666 females; 7,406 white and 9 colored; 2,593 were reported by physicians and 4,822 by midwives.

The total number of deaths reported for 1901 was 3,833, 2,083 males and 1,750 females, representing an annual death rate on an estimated population of 295,000 of 12.99 per thousand.

During the year 1901, 1,330 deaths occurred among children under five years of age, as against 1,731 for 1900, giving an infant mortality

of 34.69. The records of the department show this to be the lowest percentage of deaths occurring among children under five years of age in its history.

The following table shows the deaths among children under five years of age and the ratio to the total mortality since 1892.

	Pr. Ct.	Population.	No. of Deaths.
1893	51.90	232,000	2,317
1894	49.20	241,000	2,091
1895	46.90	250,000	1,825
1896	45.80	260,000	1,791
1897	41.65	275,000	1,502
1898	40.32	280,000	1,346
1899	40.09	285,000	1,541
1900	42.99	290,000	1,731
1901	34.07	295,000	1,330

According to these figures the death rate of children under five years of age has gradually decreased from over one half in 1893 down to nearly one third for the year 1901 of the entire number of deaths during those years.

The following table shows the number of deaths from some of the leading diseases during the last eight years.

	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.
Typhoid fever	70	63	43	31	46	47	59	63
Measles	69	1	29	36	2	26	36	17
Scarlet fever	12	5	4	3	2	36	70	16
Whooping cough	69	60	15	19	53	9	46	21
Diphtheria	237	179	198	106	61	109	124	100
Pulmonary tuberculosis	354	288	335	346	316	272	373	400
Cancer	107	139	158	164	166	194	196	206
Meningitis	107	82	96	70	108	123	72	93
Apoplexy	90	90	108	92	107	120	139	160
Convulsions	250	239	246	191	127	144	140	124
Organic heart disease	143	161	185	212	190	228	227	197
Bronchitis	169	181	189	193	182	173	180	176
Pneumonia	245	271	237	239	227	281	299	272

	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.
Diarrhoeal diseases	348	323	398	244	350	400	439	322
Nephritis	77	95	106	110	106	132	121	132
Congenital debility	415	364	374	217	194	244	323	290
Senile debility	124	116	108	123	84	69	78	115
Suicides	46	48	58	62	62	49	59	59
Accidents	119	145	143	125	116	155	152	166

DIPHTHERIA.

During the year 483 cases of diphtheria were reported to the Health Department, with 100 deaths. Since 1890 the number of cases and deaths of diphtheria reported to this department were as follows:

Years.	Cases.	Deaths.
1890	827	241
1891	1,489	400
1892	1,193	400
1893	620	273
1894	436	165
1895	375	179
1896	919	254
1897	708	138
1898	343	61
1899	722	109
1900	716	124
1901	483	100

It becomes apparent on glancing over these figures that the deaths from diphtheria have steadily decreased since the use of antitoxine has become more general, the percentage of deaths being less than half in 1901 of what is was in 1893 before antitoxine was in general use. Although the results from its use have been extremely gratifying, a still greater reduction in the death rate would result if the remedy could be used in every case, in the earlier stage of the disease and in larger doses than have heretofore been the practice.

MEASLES.

During the year 156 cases of measles were reported with 17 deaths, a mortality rate of 10.9. In 1899, 312 cases were reported with 26 deaths, and in 1900, 403 cases with 36 deaths.

This high mortality rate for measles, is, however, misleading, for it is highly improbable that out of the 156 cases reported 17 should have resulted fatally. The reason for this is that the number of cases reported to this department is but a fraction of the actual number that existed.

SCARLET FEVER.

Scarlet fever, which was present in epidemic form during 1899 and 1900, has decreased decidedly during 1901. The number of cases reported during the year being 372, with 16 deaths, as against 1,100 with 36 deaths in 1899 and 1,726 cases with 70 deaths during 1900.

The percentage of deaths from this disease during the year was 4.3.

SMALLPOX.

Smallpox, which has been very prevalent in Wisconsin and some of the neighboring states during the past year has, up to the present time, failed to gain a foothold in Milwaukee.

The 28 cases reported during 1901 were in nearly every instance brought into the city by parties who contracted the disease elsewhere. The almost marvelous exemption of this city from this dreaded scourge is largely due to the drastic measures taken by this department in preventing the spread from an existing case. Whenever the disease made its appearance in the city it has been customary for the Health Department to immediately take charge of the case, and by promptly removing the patient to the Isolation Hospital, thoroughly disinfecting the premises—destroying infected bedding by burning, and vaccinating all parties exposed to the contagion, we have succeeded in preventing the disease from obtaining a foothold.

Efforts were again made during the past year to have the Isolation Hospital moved beyond the city limits, but owing to the opposition of the country members of the county board nothing was accomplished. A bill introduced in the Legislature allowing the city to purchase ground on which to build an Isolation Hospital beyond the city limits was defeated.

The recent experiences of the Town of Greenfield should have a salutary effect upon the people of Milwaukee County outside of the city and should induce the County Board to cause the erection of an isolation hospital in connection with the County Hospital without delay.

Although we have been successful in preventing this scourge from obtaining a foothold in this city no one can foresee what the future may still have in store for us. With the disease prevailing in the entire state and steadily increasing throughout the United States, our efforts towards fighting it must be unremitting. Unfortunately for us the only effectual means of protection against this loathsome disease has been taken from us through the action of our present Governor in vetoing the bill passed by both houses of the Legislature of 1900-1, making vaccination of all unprotected persons compulsory.

That proper vaccination is a positive measure for the prevention of small pox has been proven so conclusively that only those ignorant of the facts, or prejudiced by some trivial occurrence, can doubt it.

In view of the fact that an invasion of smallpox might occur at any time, I deemed it advisable that all children attending our schools should be properly protected against this disease, and I therefore inaugurated a system of free vaccination of all children whose parents or guardians desired them to be vaccinated.

Although, as I have stated before, this proceeding was not compulsory, but was entirely optional with the parent, it was exceedingly gratifying to us to notice with what favor this movement met with the

public in general, as was demonstrated by the large number of pupils who took advantage of this opportunity.

As the extremely unfortunate occurence of an accidental infection with tetanus of a few persons in Camden, N. J., where a large number of persons were vaccinated, has of late caused a great commotion among the public, I desire to publish herewith a full account of the Official Report of the Camden Board of Health concerning these cases and showing indisputable evidence of the fact that the tetanus germs were not introduced at the time of vaccination, but that the sore in some way had become infected subsequently through some carelessness or other.

Official Report of the Camden Board of Health concerning the cases of tetanus which occurred in patients who had been vaccinated.

"We have thoroughly investigated the cases of tetanus occurring in Camden, and beg to present to the public the following facts:

1. Samples of all the different makes of vaccine employed in Camden have been tested for tetanus germs by the State Bacteriologist of New Jersey, and have been found pure and entirely free from tetanus germs; hence, tetanus could not have been caused by the virus employed. (See report of Dr. Mitchell, Secretary of New Jersey State Board of Health.)

2. The history of each case of tetanus has been carefully collected from the attending physicians, and in every instance vaccination was practiced in a correct and cleanly manner; the infection of tetanus resulting from neglect on the part of the parents to present themselves to the attending physician, so that their vaccination could receive proper attention.

3. One case of tetanus has occurred from gun-shot wound, during the same period, in a boy who had not been vaccinated, proving that the tetanus germs were in the atmosphere.

4. Indisputable evidence of the fact that the tetanus germs were not introduced at the time of vaccination is that acute tetanus occurs in from five to nine days after the introduction of the germs, whereas in every case acute tetanus occurred in from three

to four weeks after the vaccination. If the virus had been contaminated, tetanus would have ensued within nine days after vaccination. Tetanus developed in every make of virus used.

5. Further proof of the purity of the virus exists in the reports of the physicians in Cooper Hospital, who tested on animals samples of all makes of vaccine employed in Camden. If the virus had been contaminated, the animals would have developed tetanus because of their extreme susceptibility to this disease. (See animal experiments.)

6. During the past five weeks there have been vaccinated in Philadelphia a very large number of people with the same virus as employed in Camden. In not one of these cases did tetanus occur.

7. The tetanus cases in Camden are to be explained upon atmospheric and telluric conditions which have prevailed in Camden during the past six weeks. There has been a long period of dry weather with high winds, so that tetanus germs, which have their normal habitat in the earth dust, dirt of stables, etc., have been constantly distributed in the atmosphere. It is noticeable in all the cases, after careful examination as to the cause, that the wound had been exposed by the scab being knocked off or removed, or else the arm had been injured and infection resulted; frequently children scratched the vaccinated area with their dirty fingers and nails and infected the wound.

8. Vaccination should be regarded as a surgical operation and should be performed in an aseptic or clean manner, and in every instance the physician should be consulted for advice if any unusual inflammation should develop.

9. It is the unanimous opinion of the Board of Health, as well as of their committee of experts, that, inasmuch as vaccination is harmless, it should be insisted upon by physicians as an absolutely necessary procedure for the prevention of smallpox. Tetanus, or any other infection, can never occur if the vaccination is properly protected from contact with the atmosphere or with soiled clothing, bandages, etc.

HENRY D. DAVIS, M. D., President,
JOEL W. FITHIAN, M. D.,
S. G. BUSHEY, M. D.,
Committee Board of Health."

The number of children vaccinated by this department in the public and parochial schools during the last few months amounted to 18,156.

This does not include a very large number of children below the school age, who were brought to the schools by their mothers to be vaccinated.

I herewith annex the record of the children vaccinated by this department.

Total number vaccinated in 92 public and parochial schools	18,156
Total number absent from inspection	4,041
Total number from which deductions are made	14,115
Total number successful vaccinations	11,100
Total percentage successful vaccinations	.78
Total number unsuccessful vaccinations	3,015
Total percentage unsuccessful vaccinations	22
Total number primary vaccinations	8,346
Total percentage primary	59
Total number successful primary vaccinations	7,803
Total percentage successful primary vaccinations	93½
Total number unsuccessful primary vaccinations	443
Total percentage unsuccessful primary vaccinations	06½
Total number secondary vaccinations	5,769
Total percentage secondary vaccinations	40½
Total number successful secondary vaccinations	3,297
Total percentage successful secondary vaccinations	57½
Total number unsuccessful secondary vaccinations	2,472
Total percentage unsuccessful secondary vaccinations	42½

A most striking example of the benefits derived by compulsory vaccination has been given us by our newly acquired possession, Porto Rico. This island had for years, under Spanish reign, been a hot-bed of variola, and the mortality accordingly high. The constant presence of the disease had been accepted as inevitable. The number of deaths from variola during the last ten years was 621 per annum. In an article by Dr. Azel Ames, late Major and Brigade Surgeon, U. S. A., on compulsory vaccination at Porto Rico, he summarized as follows:

"In October, 1898, smallpox was endemic in Porto Rico; in December it was epidemic; in January, 1890, it had 'honeycombed' the

island; by February there were over 3,000 recent cases and the disease was spreading at a gallop.

"In February systematic compulsory vaccination, carefully and scientifically conducted and recorded, was begun simultaneously and with pretty equal efficiency in all parts of the island. It was vigorously prosecuted for four months only, till July 1st, when 860,000 vaccinations had been made in a population of about 960,000. Of these 87½ per cent. were successful. The work then ceased, because completed; the disease had practically disappeared; the fuel for it to feed upon had been consumed by the 'head-fire' of vaccination. In the two and a half years that have since passed, instead of the former annual average death rate of 621, the mortality from smallpox has been, as stated, but two per annum in a population of nearly a million. Can any honest, intelligent person doubt in face of these indisputable and easily verified facts what it was that in four short months drove smallpox from its long-time reign in the island and has since kept it out? Vaccination alone did it and will do it effectively wherever compulsory legislation, properly enforced, secures its benefits to all."

In Philadelphia, where smallpox has been prevalent of late, the Philadelphia County Medical Society placed itself on record regarding smallpox and vaccination in the following emphatic manner:

"WHEREAS, Smallpox is continuing to spread among the people of the city; and

"WHEREAS, Sensational newspaper articles minimizing the importance of vaccination have caused a number of people to refuse the vaccination offered by the city physician; and

"WHEREAS, Of the 977 cases of smallpox admitted to the Municipal Hospital during 1901 there was not a single patient who had been successfully vaccinated within a period of four years, those afflicted being almost exclusively unvaccinated persons or adults unvaccinated since infancy; therefore, be it

"*Resolved*, By the Philadelphia County Medical Society, representing the physicians of the city and county, that this Society deems it necessary to impress upon the community that universal vaccination is the most effective means of stamping out smallpox, and that although fumigation and

disinfection are valuable adjuncts, they can by no possibility do away with the necessity for vaccination, since smallpox patients are the most important carriers of infection, and such infection can not be influenced by the disinfection of smallpox; be it further

"*Resolved*, That publications which slur the importance of vaccination despite the incontrovertible testimony of 100 years are to be deprecated as contrary to the best interests of the community. Such articles are known to have dissuaded people from vaccination who have subsequently died of smallpox."

In the city of Chicago 346 cases of smallpox were removed to the Isolation Hospital in the last 3 years, and of all these not a single one was properly vaccinated, as defined by the vaccination creed of H. C. Reynolds.

"A VACCINATION CREED.

"We, the undernamed, hereby Publicly Profess our firm Belief —based upon positive knowledge, gained through Years of Personal Experience and Study of Smallpox and Vaccination—

1st. THAT TRUE VACCINATION—REPEATED UNTIL IT NO LONGER TAKES — ALWAYS PREVENTS SMALLPOX. NOTHING ELSE DOES.

2nd. That true Vaccination—that is, Vaccination properly done on a CLEAN arm with PURE lymph and kept perfectly CLEAN and UNBROKEN afterwards—never did and NEVER WILL make a serious sore.

3rd. That such Vaccination leaves a characteristic scar, unlike that from any other cause; which is recognizable during life and is the ONLY conclusive evidence of a Successful Vaccination.

4th. That no untoward results ever follow such Vaccination; on the other hand thousands of lives are annually sacrificed through neglect—a neglect begotten of WANT OF KNOWLEDGE.

ARTHUR M. REYNOLDS, M. D.,
Commissioner of Health,
City of Chicago.

HERMAN SPALDING, M. D.,
Chief Medical Inspector,
Department of Health."

Since January 1, 1901, Milwaukee has had 83 cases of smallpox, of which number 82 were removed to the Isolation Hospital. Sixty-eight of these patients were never vaccinated. Of the 15 vaccinated

cases 12 were vaccinated during childhood and only 3 recently, i. e. 4, 6 and 8 years ago. All the vaccinated cases were very mild in character, while the 6 severe cases occurred among the unvaccinated.

Vaccination, if properly performed by a competent physician, with carefully selected bovine virus and under perfectly aseptic conditions before and after vaccination, is entirely free from any risk or danger. This has been demonstrated conclusively. Through vaccination, and vaccination only, shall we ever succeed in entirely ridding ourselves of smallpox.

TUBERCULOSIS.

The question pertaining to the contagiousness of tuberculosis has been detailed at length in several previous reports, and it is unnecessary to more than mention it here, so that this fact may never be wholly out of mind.

It was suggested in a former communication that the distribution of printed circulars containing directions for the afflicted consumptives and their attendants, was the means of reaching those who need instruction in the matter of protecting themselves and others. In accordance with this suggestion such circulars have been distributed at the instance of physicians or friends of those desiring or requiring this information. Since there is no law compelling physicians to report cases of consumption occurring in their practice, and since physicians are loath to make public in any way, the ills of their patients, the demands for these circulars have necessarily been comparatively few. Nevertheless, unless our belief in the common sense and judgment of people is wholly fallacious, we must think that some profited by the perusal of these circulars of instruction. Only the kindliest motives actuated this department in distributing them, and we trust that benefit accrued to many who would otherwise have remained in baneful ignorance of the rudiments of precautionary measures.

The following circular of instruction was sent to the patient:

OFFICE OF COMMISSIONER OF HEALTH, CITY HALL,

RULES FOR THE CONSUMPTIVE PATIENT.

Your first question may be, Is Consumption curable? Though you may be a sufferer from the disease, do not take it for granted that your days are numbered. Very many consumptives recover fully from their disease, and a large proportion improve to such a degree that they enjoy excellent health and are practically free from annoying symptoms. Investigation has shown that forty per cent. of all persons who die of any and all causes have, at one time or other, been afflicted with Consumption. Furthermore, only ten per cent. of all deaths are due to Consumption. Therefore, we conclude that three-fourths of all people who are consumptives recover from their disease. Isn't that encouraging?

There is, therefore, no reason why you should not be among those who recover good health, but, in order to be one of them, you must apply yourself diligently to the proper care of your person and your surroundings.

In the first place, you must realize that you have a disease that is contagious, and that you must and can protect others as well as yourself. You can protect others by exercising care in the disposition of your expectoration —which, as you may know, is the chief source of contagion. If you use a cup for your sputum, see that it always contains an inch of carbolic acid water, and if you use bits of cloth or paper, see that these are properly burned. Do not spit into handkerchiefs. Never fail while coughing, to hold something in front of your mouth, so that the sputum will not be scattered about the room or be deposited upon the carpet or furniture. Keep your clothes, body, and especially your hands and face clean. If your hands or face are accidentally stained with sputum, do not wipe them on your handkerchief, but wash them thoroughly. Enjoy as much fresh air as possible, and sleep in a well-ventilated room. Eat much and often. Put yourself under the care of a competent physician, who can watch you from time to time and suggest other ways of helping you back to good health. By exercising care about your person you will prevent your disease—which may be confined to the lungs—from attacking other organs. Never swallow expectoration, and eat only wholesome and easily digested articles, so that your stomach may remain in good condition. The better the state of your stomach and intestines, the less likelihood is there of the disease attacking these parts.

Kissing should not be indulged in, because the germs are constantly hovering about the mouth, and may be a source of danger to others.

When we say that Tuberculosis, or Consumption, is a contagious disease, just as Scarlet Fever, Diphtheria and Measles, we know that this statement will seem exaggerated. Scarlet Fever and Diphtheria are acute diseases—that is, their onset is rapid, and a week or ten days after exposure the first symptoms show themselves. Consumption, on the other hand, is, in the

majority of instances, a rather slow disease, and therefore, since a long time may elapse after exposure, before the first symptoms manifest themselves, we are inclined to lose sight of the original source of contagion, and argue that a particular case of Consumption has developed of its own accord.

Setting aside the extremely few cases of Consumption that are directly inherited, we may say that every case of Consumption develops of its own accord and is due to an infection obtained in a definite manner from another consumptive.

The principal source of infection is the sputum (expectoration—spit) of the consumptive invalid; other causes may exist, such as bad milk and meat, but to a minor degree. We can, therefore, devote most of our time to a consideration of "sputum" as the source of infection.

Examinations made during the past twenty years have proven over and over again that the sputum of consumptives always contain certain little germs called "bacilli," which we have learned to recognize as the cause of the disease. These germs are extremely small and multiply with enormous rapidity when they find a suitable and fertile soil. Such a fertile soil for their growth is found in the lungs, bones and other organs, so it is easily understood how an individual who has taken many of these germs into his system can develop Consumption in some form or other.

How do these germs get into the system of a healthy person? Consumptives do not use greater caution than most other people as to where they deposit their expectoration; this expectoration, laden, as we have shown, with the bacilli, dries where it falls and becomes dust, which is then driven into the air by the wind; this dust, with its many germs, when inhaled, gives rise to many cases of the disease.

Therefore, the first thing of importance consists in the proper care of the sputum. Consumptives should either deposit their sputum into small bits of cloth or paper, that can be burned, or into cups containing germicide, among the best being carbolic acid 1—20. There are especially prepared paste-board cups made for this purpose, which are cheap and clean and very convenient.

Persons living with a consumptive must exercise great care in the handling of the invalid. The invalid should use his own soap, towels, knife and fork and drinking utensils, and all these should be thoroughly scalded after their use. The attendants should wash their hands frequently, and must not eat of food coming from the invalid's plate.

It must be remembered that the consumptive's breath is not dangerous, and that the air in the room in which the consumptive lives contains only germs which get there from the dried expectoration and through the cough. Therefore, one must never be off his guard, but always bear in mind that rigid cleanliness is the price of health.

In a previous report mention was made of the desirability of erecting sanatoria in every state for the treatment of consumption. Such

measures have been introduced by various legislative bodies, and ultimately we hope to see a similar institution in this state.

It is regretable that the "Anti-spitting Ordinance" introduced during the past session of the honorable aldermanic body, did not meet with favorable consideration, because the necessity of assisting the public health by such a measure is only too evident to those who have made a study of the question.

TYPHOID FEVER.

During the past year 205 cases of typhoid fever were reported to the Health Department, and of these 63 died. Were this a correct statement of the number of cases of typhoid that occurred the mortality would be over 30%. As pointed out in a previous report, such a statistical record is of relatively little value, for it merely proves that many more cases of typhoid raged in the city, and that either the cases were not properly reported, or that they had no medical treatment, or were unrecognized by the attendants. Taking 10% as a maximum mortality, there must have existed over 600 cases during the year. This is probably a more nearly correct estimate than that given in the official records. No epidemic of any severity occurred at any time during the year, and a considerable reduction over last year's reported cases (340) is noted.

Respectfully submitted,

F. M. SCHULZ, M. D.,

Commissioner of Health.

REPORT

OF

REGISTRAR.

BUREAU OF VITAL STATISTICS.

F. M. Schulz, M. D., Commissioner of Health:

SIR—I herewith present for your consideration the twenty-fifth annual report of the vital statistics of the City of Milwaukee for the year ending Dec. 31, 1901.

DEATHS.

During the year there were reported to this department 3,833 deaths, exclusive of stillbirths. The annual death rate, based upon an estimated population of 295,000 being 12.99 per thousand.

The number of deaths for the preceding year was 4,026, and the death rate 13.88 per thousand.

The low rate of mortality for the past year is, of course, highly gratifying, and is, it is believed, lower than that of any city in the world of 250,000 population and upward.

The decrease in deaths is noted almost exclusively among infants and young children. During the year 1900 there were 1,731 deaths occurring under five years of age, while for 1901 there were but 1,330, a decrease of 401, which represents the major part of the difference in the number of deaths for the two years.

While the infant mortality has thus been reduced the deaths due to old age, or the conditions incident thereto have increased. The more nearly the condition is approximated of low infant mortality, and of higher proportion of deaths from old age, the more nearly perfect, it may be assumed, are all the hygienic conditions surrounding the individuals of any community.

Following is a table showing the number of deaths, and the annual death rate of the city for the years 1891 to 1901 inclusive:

Year.	Population.	Deaths.	Annual Rate.
1891	214,000	4,689	21.91
1892	223,000	4,516	20.25
1893	232,000	4,462	19.23

Year.	Population.	Deaths.	Annual Rate.
1894	241,000	4,253	17.64
1895	250,000	3,885	15.54
1896	260,000	3,904	15.00
1897	275,000	3,606	13.11
1898	280,000	3,338	11.92
1899	285,000	3,843	13.48
1900	290,000	4,026	13.88
1901	295,000	3,833	12.99

From the foregoing table it will be seen that the average population for the eleven years is 258,636, and the average number of deaths per year 4,032. This gives an average annual death rate for the period of 15.54 per thousand. The death rate for 1901, therefore, is 2.55 less per thousand than the average rate for the eleven years.

Of the 3,833 deaths, 2,083 were males and 1,750 females; the proportion being 54.3 males to 45.7 females.

By reference to Table No. 1, it will be seen that of the total number of deaths reported, 1,330 or 34.7 per cent were under five years of age, 115 or 3 per cent. from 5 to 10 years, 190 or 4.9 per cent. from 10 to 20, 584 or 15.2 per cent. from 20 to 40 years, 649 or 16.9 per cent. from 40 to 60 years, and 965 or 24.6 per cent. were 60 years of age.

The four wards having the greatest mortality in proportion to population were the Fourteenth, Fifth, Twelfth and Eleventh, with death rates of 15.07, 13.81, 12.84 and 12.75 respectively. The four wards having the lowest death rates were the First, Fifteenth, Sixteenth and Second, the rates being respectively 9.32, 9.36, 9.61 and 9.70.

BIRTHS.

There were 7,415 births reported during the year, which represents an annual birth rate of 25.14 per thousand. The number of births reported is, in all probability from 15 to 20 per cent below the number actually occurring, notwithstanding the fact that our laws demand the reporting of every birth, and provides at the same time a fair remuneration for the labor involved.

The Fourteenth ward has the highest number of births, representing a birth rate of 47.28 per thousand population, while the Seventh ward is lowest, having but 5.89 births per thousand of its population.

MARRIAGES.

During the year 2,460 marriages were reported for registration in this office. This number undoubtedly represents quite accurately the marriage rate of the city, for while it is true that out of the number reported, about 400 were of non-residents, it is very probable that about as many residents of the city were married elsewhere.

CONTAGIOUS DISEASES.

By reference to Table 28 it will be seen that there were reported 1,246 of the principal contagious diseases during the year, with 218 deaths from the same. For the preceding year there were reported 3,187 cases and 335 deaths.

The decrease is noted in all the diseases, (except smallpox which has been epidemic throughout the country), and is especially true of scarlet fever, the decrease in cases of this disease being from 1,726 in 1900 to 372 in 1901.

On the following pages will be found various tables, setting forth in detail, analyses of the vital statistics as recorded during the year.

Respectfully yours,

J. W. COON, M. D.,

Registrar of Vital Statistics.

STATISTICAL TABLES.

TABLE No. 1.—Showing the number of Deaths, according to
The Annual Death Rate per 1,000, for the Year
For the year 1900 there were 4,026 deaths, represen

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.				Nativity.		
		Male.	Female.	Single.	Married.	Widowed.	Divorced.	Milwaukee.	U. S. other than Mil.	Foreign.
TOTAL—All Causes	3833	2083	1750	1930	1301	581	21	1732	566	1535
GENERAL DISEASES	1114	587	527	496	473	139	6	418	219	477
Typhoid Fever	63	38	25	26	35	2	.....	21	16	26
Measles	17	11	6	17	.....	.....	.....	17	.....	.....
Scarlet Fever	16	11	5	16	.....	.....	.....	15	1	.....
Whooping Cough	21	9	12	21	.....	.....	.....	20	1	.....
Diphtheria and Memb. Croup	100	57	43	100	.....	.....	.....	85	14	1
Other Epidemic Diseases	76	41	35	17	25	34	.....	8	12	56
Pulmonary Tuberculosis	400	213	187	166	202	27	5	139	103	158
Other Tubercular Diseases	73	39	34	50	18	5	.....	47	11	15
Cancer	206	92	114	14	141	50	1	7	37	162
Other General Diseases	142	76	66	69	52	21	.....	59	24	59
LOCAL DISEASES	2476	1312	1164	1347	710	408	11	1258	296	922
Meningitis	93	54	39	76	17	.....	.....	68	13	12
Apoplexy	160	88	72	12	87	60	1	8	30	122
Other Dis. of Brain and M'mbr'ne	44	26	18	21	17	5	1	16	11	17
Paralysis	9	3	6	1	6	2	.....	1	1	7
Convulsions	124	77	47	124	.....	.....	.....	124	.....	.....
Other Nervous Diseases	13	10	3	9	3	1	.....	7	2	4
Organic Heart Diseases	197	94	103	34	102	56	5	29	34	134
Other Dis. of Circulating System	46	21	25	7	21	18	.....	4	9	33
Bronchitis	176	87	89	110	28	38	.....	106	10	60
Pneumonia	272	152	120	114	104	52	2	102	36	134
Broncho-Pneumonia	54	27	27	41	6	4	.....	36	6	12
Asthma	18	12	6	2	11	4	1	2	1	15
Pleurisy	7	5	2	4	3	.....	.....	4	.....	3
Other Respiratory Diseases	23	15	8	15	7	1	.....	16	1	6
Gastritis	28	19	9	22	6	.....	.....	22	2	4
Diarrhoeal Diseases	322	179	143	315	6	1	.....	299	16	7
Appendicitis and Peritonitis	79	39	40	47	26	6	.....	35	21	23
Hernia and Intestinal Obstruction	35	18	17	10	17	8	.....	8	6	21
Cirrhosis of Liver	31	21	10	2	22	7	.....	1	4	26
Other Digestive Diseases	68	32	36	30	28	9	1	29	12	27
Nephritis	132	76	56	24	69	39	.....	21	27	84
Other Urinary Diseases	30	28	2	3	18	9	.....	2	8	20
Dis. of Female Generative System	34	.....	34	8	25	1	.....	6	16	12
Puerperal Septicaemia	28	.....	28	.....	28	.....	.....	3	4	21
Other Diseases of Pregnancy	21	.....	21	2	19	.....	.....	6	4	11
Dis. of Skin and Cellular Tissue	19	7	12	12	2	5	.....	10	1	8
Locomotor System	2	1	1	2	.....	.....	.....	2	.....	.....
Malformations	6	5	1	6	.....	.....	.....	5	1	.....
Congenital Debility	290	160	130	290	.....	.....	.....	286	4	.....
Senile Debility	115	56	59	4	32	79	.....	.....	16	99
VIOLENCE	229	181	48	82	113	30	4	52	46	131
Suicide	59	49	10	14	38	6	1	4	14	41
Accidental	166	132	34	67	72	24	3	48	30	88
Homicide	4	.....	4	1	3	.....	.....	.....	2	2
Other Causes—Ill Defined	14	3	11	5	5	4	.....	4	5	5

Cause, Sex, Social Condition, Nativity, and Age, for the year 1901.
was 12.99 on an Estimated Population of 295,000.
ting an Annual Death Rate of 13.88 per 1,000 population.

AGE.																						
Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	90 to 95.	95 to 100.
1001	173	65	44	47	115	62	128	146	137	134	167	182	143	168	156	166	176	195	210	142	53	18	5
78	45	20	20	27	55	23	78	75	84	60	76	69	53	60	61	49	47	48	44	32	9	1	...
2	....	1	1	....	1	3	9	7	9	7	6	6	5	3	1	...	2	...	...	...	...	...	...
5	6	2	3	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
2	3	2	1	2	4	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
11	6	1	1	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
3	16	11	11	17	33	6	2	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	...
5	....	.. .	....	....	2	....	1	....	5	1	4	2	3	4	2	3	6	13	11	10	4	...	...
1	1	.. .	1	2	1	4	54	62	56	43	40	33	25	24	19	10	10	6	5	3	...	...	...
17	9	2	2	1	8	1	4	2	4	3	4	5	1	2	4	1	1	1	1	...	...	...	...
...	....	1	....	....	....	2	1	....	4	2	12	16	17	23	26	28	20	17	21	13	3	...	...
32	4	.. .	....	3	5	5	7	4	6	4	9	7	2	4	9	7	8	11	6	6	2	1	...
919	123	41	22	17	44	32	38	60	41	56	72	88	71	82	75	107	119	142	155	106	44	17	5
20	13	9	5	6	9	8	2	2	....	1	3	4	3	3	3	...	2	...	...	...	...	...	...
....	....	.. .	....	....	1	1	2	1	4	1	4	5	15	8	12	22	25	20	21	12	5	1	...
13	....	2	....	....	2	....	1	1	2	1	....	1	4	3	2	3	1	2	5	...	1	...	...
....	....	.. .	....	....	....	....	....	....	....	....	2	1	...	1	...	1	...	2	2	...	...	...	...
116	4	.. .	2	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
1	1	.. .	....	....	....	1	1	....	....	4	....	1	1	....	....	....	1	1	1	....	....	....	...
9	1	.. .	....	1	3	2	5	10	3	4	9	15	12	10	19	17	22	19	19	13	3	1	...
1	....	.. .	....	....	1	1	....	2	2	1	....	....	...	4	1	5	7	5	7	7	...	2	...
86	13	4	2	1	1	1	....	....	....	....	....	....	1	3	2	4	9	12	18	11	7	1	...
39	19	9	5	4	9	2	7	12	8	11	12	11	9	18	9	18	16	16	25	8	4	1	...
25	6	6	....	....	1	2	....	....	....	....	....	1	...	1	2	1	1	3	3	1	1	...	...
....	....	1	1	....	....	....	....	....	....	....	2	...	1	1	...	2	1	4	3	1	3	...	...
1	2	1	....	....	....	....	....	....	....	....	3	....	....	....	....	....	....	....	....	....	....	....	...
4	3	.. .	2	1	4	1	....	1	....	2	1	....	....	....	....	3	...	1	....	....	....	....	...
15	4	1	1	1	....	....	....	1	....	....	....	....	....	2	...	1	...	1	...	1	....	....	...
250	51	6	3	1	2	1	1	....	....	....	1	1	....	....	1	1	....	....	....	1	1	1	...
1	1	1	....	....	6	8	13	13	3	2	8	6	4	3	1	1	1	5	...	2	...	...	...
6	1	.. .	....	....	....	....	....	1	....	....	2	2	3	4	2	4	4	5	...	...	1	...	...
....	....	.. .	....	....	....	....	....	1	1	....	....	5	5	3	4	5	4	3	....	....	....	....	...
19	1	1	1	1	....	1	1	2	1	5	4	4	3	4	5	3	4	4	2	2	....	....	...
7	1	.. .	....	1	2	2	2	2	4	3	2	12	7	13	9	13	15	13	15	7	2	....	...
1	....	.. .	....	....	....	....	....	....	....	1	4	2	...	1	1	1	3	9	4	2	.. .	1	...
....	....	.. .	....	....	....	....	....	6	4	4	6	10	3	...	1	...	....	....	....	....	....	....	...
....	....	.. .	....	....	....	....	1	3	5	10	5	4	....	....	....	....	....	....	....	....	....	....	...
1	....	.. .	....	....	....	....	1	2	4	6	4	3	....	....	....	....	....	....	....	....	....	....	...
8	2	.. .	....	....	1	....	....	....	....	....	....	....	....	....	1	...	2	2	2	...	1	...	...
....	....	.. .	....	....	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
6	....	.. .	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
290	....	.. .	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
....	....	.. .	....	....	....	....	....	....	....	....	....	....	....	....	....	2	1	15	28	38	17	9	5
4	4	4	2	3	14	6	11	10	11	18	19	22	19	24	19	9	7	6	11	4	2	...	...
...	....	.. .	....	....	....	1	....	6	3	3	6	6	6	7	11	3	3	2	2	...	....	....	...
4	4	4	2	3	14	5	11	4	8	14	11	15	13	17	8	6	4	4	9	4	2	...	...
....	....	.. .	....	....	....	....	....	....	....	1	2	1	...	....	....	....	....	....	....	....	....	....	...
....	1	.. .	....	....	2	1	1	....	1	....	....	3	...	1	1	...	1	1	...	1	...	...	...

TABLE No. 2.—Deaths According to Cause, Sex,

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.				Nativity.		
		Male.	Female.	Single.	Married.	Widowed.	Divorced.	Milwaukee.	U. S. other than Mil.	Foreign.
TOTAL—All Causes	391	217	174	190	137	61	3	174	57	160
GENERAL DISEASES	128	73	55	55	45	27	1	48	20	60
Typhoid Fever	3	2	1	2	.....	1	.....	.....	.....	3
Measles	5	3	2	5	.....	.....	.....	5	.....	.....
Scarlet Fever	4	3	1	4	.....	.....	.....	4	.....	.....
Whooping Cough	2	.....	2	2	.....	.....	.....	2	.....	.....
Diphtheria & Membranous Croup	16	11	5	16	.....	.....	.....	14	2	.....
Other Epidemic Diseases	33	20	13	7	6	20	.....	4	3	26
Pulmonary Tuberculosis	30	16	14	12	15	2	1	13	8	9
Other Tubercular Diseases	3	.....	3	1	2	.....	.....	1	.....	2
Cancer	19	13	6	1	15	3	.....	1	3	15
Other General Diseases	13	5	8	5	7	1	.....	4	4	5
LOCAL DISEASES	248	133	115	132	84	30	2	124	30	94
Meningitis	11	6	5	9	2	.....	.....	10	.....	1
Apoplexy	11	8	3	.....	8	3	.....	.....	4	7
Other Dis. of Brain & Membranes	4	3	1	3	1	.....	.....	3	1	.....
Paralysis	2	.....	2	.....	2	.....	.....	.....	.....	2
Convulsions	16	9	7	16	.....	.....	.....	16	.....	.....
Other Nervous Diseases	3	2	1	2	1	.....	.....	2	.....	1
Organic Heart Diseases	25	14	11	5	15	4	1	6	2	17
Other Dis. of Circulatory System	4	1	3	.....	2	2	.....	.....	.....	4
Bronchitis	25	13	12	15	4	6	.....	15	1	9
Pneumonia	40	22	18	18	17	5	.....	13	8	19
Broncho-pneumonia	4	1	3	3	1	.....	.....	2	1	1
Asthma	4	3	1	2	1	.....	1	2	.....	2
Pleurisy	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Respiratory Diseases	7	6	1	5	2	.....	.....	5	.....	2
Gastritis	4	2	2	3	1	.....	.....	3	.....	1
Diarrhoeal Diseases	11	5	6	11	.....	.....	.....	10	1	.....
Appendicitis and Peritonitis	6	3	3	5	1	.....	.....	4	.....	2
Hernia and Intest. Obstruction	3	2	1	2	1	.....	.....	1	.....	2
Cirrhosis of Liver	4	3	1	.....	4	.....	.....	.....	.....	4
Other Digestive Diseases	3	.....	3	1	1	1	.....	1	.....	2
Nephritis	9	6	3	1	7	1	.....	1	2	6
Other Urinary Diseases	2	2	.....	.....	2	.....	.....	.....	1	1
Dis. of Female Generative System	7	.....	7	3	4	.....	.....	2	4	1
Puerperal Septicæmia	3	.....	3	.....	3	.....	.....	.....	2	1
Other Diseases of Pregnancy	2	.....	2	.....	2	.....	.....	.....	.....	2
Diseases of Skin & Cellular Tissue	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Locomotor System	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Malformations	2	1	1	2	.....	.....	.....	2	.....	.....
Congenital Debility	26	15	11	26	.....	.....	.....	26	.....	.....
Senile Debility	10	6	4	.....	2	8	.....	.....	3	7
VIOLENCE	14	11	3	3	7	4	.....	2	6	6
Suicides	3	2	1	1	2	.....	.....	.....	3	.....
Accidents	11	9	2	2	5	4	.....	2	3	6
Homicides	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Causes and Ill-defined	1	.....	1	.....	1	.....	.....	.....	1	.....

Social Condition, Nativity and Age, For January, 1901.

AGE.																							
Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	90 to 95.	95 to 100.
91	24	9	7	5	14	4	15	15	10	8	15	14	14	14	15	19	15	26	23	22	11	1	...
9	7	5	2	4	7	3	10	4	9	2	10	5	...	4	5	8	3	11	7	10	3	...	...
...	...	...	...	...	...	...	...	1	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...
1	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	...	...	...	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	3	2	2	1	4	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	...	...	...	1	...	1	...	2	...	2	...	...	...	...	1	...	8	3	9	3	...	...
...	...	...	...	1	1	...	6	3	5	2	5	2	...	1	3	1	...	...	...	...	...	...	...
...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...
...	...	1	...	...	...	...	...	...	...	...	2	...	...	2	2	5	2	1	3	1	...	...	...
2	...	...	...	1	...	...	2	...	1	...	...	3	...	...	...	1	1	1	1	...	...	...	...
82	16	4	5	1	7	1	4	11	1	6	4	6	12	8	9	11	12	15	13	11	8	1	...
4	3	...	...	1	1	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	3	1	2	1	2	...	...	...
2	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...
13	1	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
2	...	...	...	...	1	...	1	2	...	1	1	1	2	1	5	1	3	1	...	3	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	3	...	...	...	...
12	2	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	3	...	1	4	...	...
6	3	2	1	...	1	...	2	2	1	...	2	3	...	2	2	2	3	2	4	1	...	1	...
2	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	2	...	1	...	1	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...
2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
8	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	1	...	1	2	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...
1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	1	...	...	...	...	...	...	...	...
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	1	1	1	...	1	...	1	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...
...	...	...	...	...	...	...	...	3	...	1	1	1	1	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	1	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	3	3	...	...
...	1	...	...	...	...	...	1	...	...	...	1	2	2	2	1	...	...	...	3	1	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	...	...	...	...	...	...	...	...
...	1	...	...	...	...	...	1	...	...	...	1	1	1	1	1	...	...	...	3	1	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...

TABLE No. 3.—Deaths According to Cause, Sex,

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.				Nativity.		
		Male.	Female.	Single.	Married.	Widowed.	Divorced.	Milwaukee.	U. S. other than Mil.	Foreign.
TOTAL—All Causes	317	164	153	158	100	57	2	144	37	136
GENERAL DISEASES	94	48	46	41	37	15	1	31	14	49
Typhoid Fever	3	2	1	1	2	.....	.....	.....	1	2
Measles	2	1	1	2	.....	.....	.....	2	.....	.....
Scarlet Fever	2	2	.....	2	.....	.....	.....	2	.....	.....
Whooping Cough	5	1	4	5	.....	.....	.....	5	.....	.....
Diphtheria & Membranous Croup.	5	2	3	5	.....	.....	.....	5	.....	.....
Other Epidemic Diseases	21	13	8	6	8	7	.....	2	1	18
Pulmonary Tuberculosis	26	13	13	11	12	2	1	7	9	10
Other Tubercular Diseases	6	2	4	4	1	1	.....	5	.....	1
Cancer	17	6	11	1	11	5	.....	.....	2	15
Other General Diseases	7	6	1	4	3	.....	.....	3	1	3
LOCAL DISEASES	204	104	100	109	54	40	1	106	22	76
Meningitis	7	4	3	3	4	.....	.....	2	1	4
Apoplexy	17	9	8	.....	10	7	.....	.....	5	12
Other Dis. of Brain & Membranes	2	1	1	1	1	.....	.....	1	.....	1
Paralysis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Convulsions	10	7	3	10	.....	.....	.....	10	.....	.....
Other Nervous Disease	1	1	.....	1	.....	.....	.....	1	.....	.....
Organic Heart Diseases	19	8	11	5	7	6	1	5	3	11
Other Dis. of Circulatory System	2	1	1	1	.....	1	.....	.....	1	1
Bronchitis	14	5	9	8	1	5	.....	7	3	4
Pneumonia	30	20	10	20	6	4	.....	18	3	9
Broncho-pneumonia	8	3	5	6	1	1	.....	6	.....	2
Asthma	1	1	.....	.....	1	.....	.....	.....	.....	1
Pleurisy	1	1	.....	1	.....	.....	.....	1	.....	.....
Other Respiratory Diseases	3	1	2	1	2	.....	.....	3	.....	.....
Gastritis	1	1	.....	1	.....	.....	.....	1	.....	.....
Diarrhœal Diseases	10	4	6	10	.....	.....	.....	10	.....	.....
Appendicitis and Peritonitis	7	3	4	5	2	.....	.....	4	1	2
Hernia & Intestinal Obstruction	3	3	.....	3	.....	.....	.....	3	.....	.....
Cirrhosis of Liver	1	.....	1	.....	1	.....	.....	.....	.....	1
Other Digestive Diseases	4	2	2	1	2	1	.....	1	.....	3
Nephritis	11	5	6	3	3	5	.....	2	2	7
Other Urinary Diseases	6	5	1	.....	4	2	.....	.....	2	4
Dis. of Female Generative System	1	.....	1	.....	1	.....	.....	.....	.....	1
Puerperal Septicæmia	3	.....	3	.....	3	.....	.....	1	.....	2
Other Diseases of Pregnancy	2	.....	2	.....	2	.....	.....	1	1	.....
Dis. of Skin and Cellular Tissue	1	.....	1	.....	.....	1	.....	.....	.....	1
Locomotor System	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Malformations	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Congenital Debility	29	17	12	29	.....	.....	.....	29	.....	.....
Senile Debility	10	2	8	.....	3	7	.....	.....	.....	10
VIOLENCE	18	12	6	8	9	1	.....	7	.....	11
Suicides	4	4	.....	.....	3	1	.....	.....	.....	4
Accidents	13	8	5	8	5	.....	.....	7	.....	6
Homicides	1	.....	1	.....	1	.....	.....	.....	.....	1
Other Causes and Ill-Defined	1	.....	1	.....	.....	1	.....	.....	1	.....

Social Condition, Nativity and Age, For February, 1901.

AGE.																							
Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	90 to 95.	95 to 100.
84	10	6	5	3	16	6	7	11	4	12	11	14	11	12	14	16	11	20	28	10	4	2	...
10	2	2	1	2	6	1	3	5	2	5	4	8	5	5	5	6	3	6	9	4	...	...	...
...	...	...	...	...	...	...	...	...	...	1	1	1	...	...	...	...	...	...	...	...	...	...	...
1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	1	...	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	...	...	...	...	1	...	...	...	1	...	1	...	3	2	1	...	1	4	6	...	...	...	...
...	...	...	...	...	...	1	3	3	1	3	1	5	1	3	2	...	1	1	...	1	...	...	...
2	1	...	...	...	1	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	1	1	2	...	...	1	5	1	...	3	3	...	...	...
2	...	...	...	...	1	...	...	1	...	...	...	...	1	...	...	1	...	1	...	...	...	...	...
73	8	3	4	1	7	4	3	6	2	6	6	5	6	5	6	10	6	14	17	6	4	2	...
1	1	...	1	...	...	...	...	...	...	1	1	...	...	2	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	1	...	2	1	1	4	2	1	1	3	...	1	...	...
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2	...	...	...	...	1	...	1	1	...	...	...	2	1	...	...	2	...	5	4	...	...	...	...
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6	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	3	1	1	...
7	3	1	3	1	3	1	...	...	...	1	1	...	3	1	...	1	1	2	1	...	...	...	...
4	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...
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8	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	1	...	...	...	...	...
1	1	...	...	...	...	1	...	...	...	...	...	...	...	...	1	2	2	1	1	1	...	...	...
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...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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1	...	1	...	...	3	1	1	...	...	1	1	...	...	2	3	...	2	...	2	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	3	...	...	...	...	...	...	...	...
1	...	1	...	...	3	1	1	...	...	1	...	...	...	1	...	...	2	...	2	...	...	...	...
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TABLE No. 4.—Deaths According to Cause, Sex,

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.				Nativity.		
		Male.	Female.	Single.	Married.	Widowed.	Divorced.	Milwaukee.	U. S. other than Mil.	Foreign.
TOTAL—All Causes	339	168	171	170	108	58	3	153	53	133
GENERAL DISEASES	105	46	59	48	44	12	1	37	26	42
Typhoid Fever	4	2	2	1	3	.....	.....	1	.....	3
Measles	1	.....	1	1	.....	.....	.....	1	.....	.....
Scarlet Fever	1	.....	1	1	.....	.....	.....	.....	1	.....
Whooping Cough	4	2	2	4	.....	.....	.....	3	1	.....
Diphtheria & Membranous Croup.	12	6	6	12	.....	.....	.....	10	2	.....
Other Epidemic Diseases	12	5	7	2	6	4	.....	2	3	7
Pulmonary Tuberculosis	41	21	20	19	21	1	.....	13	12	16
Other Tubercular Diseases	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cancer	17	5	12	1	11	4	1	1	3	13
Other General Diseases	13	5	8	7	3	3	.....	6	4	3
LOCAL DISEASES	224	115	109	119	58	45	2	116	25	83
Meningitis	9	5	4	8	1	.....	.....	7	2	.....
Apoplexy	18	7	11	1	7	10	.....	1	2	15
Other Dis. of Brain & Membranes	3	3	.....	1	1	1	.....	1	.....	2
Paralysis	2	2	.....	.....	2	.....	.....	.....	.....	2
Convulsions	22	12	10	22	.....	.....	.....	22	.....	.....
Other Nervous Disease	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Organic Heart Diseases	13	4	9	1	10	1	1	1	3	9
Other Dis. of Circulatory System.	2	1	1	.....	1	1	.....	.....	.....	2
Bronchitis	31	13	18	21	4	6	.....	21	2	8
Pneumonia	39	16	23	18	11	10	.....	18	4	17
Broncho-pneumonia	8	4	4	8	.....	.....	.....	7	1	.....
Asthma	1	1	.....	.....	.....	1	.....	.....	.....	1
Pleurisy	1	.....	1	.....	1	.....	.....	.....	.....	1
Other Respiratory Diseases	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gastritis	2	2	.....	1	1	.....	.....	1	.....	1
Diarrhœal Diseases	9	7	2	9	.....	.....	.....	8	1	.....
Appendicitis and Peritonitis	7	4	3	3	3	1	.....	2	2	3
Hernia and Intestinal Obstruction	1	1	.....	1	.....	.....	.....	1	.....	.....
Cirrhosis of Liver	1	1	.....	.....	1	.....	.....	.....	1	.....
Other Digestive Diseases	5	2	3	1	2	1	1	1	3	1
Nephritis	12	9	3	2	7	3	.....	3	1	8
Other Urinary Diseases	1	1	.....	.....	.....	1	.....	.....	.....	1
Dis. of Female Generative System	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Puerperal Septicæmia	1	.....	1	.....	1	.....	.....	.....	.....	1
Other Diseases of Pregnancy	4	.....	4	1	3	.....	.....	2	1	1
Diseases of Skin & Cellular Tissue	1	1	.....	1	.....	.....	.....	1	.....	.....
Locomotor System	1	1	.....	1	.....	.....	.....	1	.....	.....
Malformations	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Congenital Debility	19	12	7	19	.....	.....	.....	18	1	.....
Senile Debility	11	6	5	.....	2	9	.....	.....	1	10
VIOLENCE	9	7	2	2	6	1	.....	.....	1	8
Suicides	1	1	.....	1	.....	.....	.....	.....	.....	1
Accidents	8	6	2	1	6	1	.....	.....	1	7
Homicides	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Causes and Ill-Defined	1	.....	1	1	.....	.....	.....	.....	1	.....

Social Condition, Nativity and Age, For March, 1901.

AGE.																							
Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	90 to 95.	95 to 100.
97	13	8	4	4	8	4	13	11	9	8	23	12	13	13	8	14	18	21	20	12	2	2	2
5	5	3	3	4	3	1	10	8	7	2	11	7	5	7	5	5	6	2	2	3	1	...	...
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1	2	..	1	....	....	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
....	2	3	2	3	2	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
1	....	..	....	....	....	....	....	....	1	....	1	1	...	1	1	2	2	...	...	1	1	...	...
....	....	..	....	....	....	....	7	8	5	2	7	3	3	2	1	1	2	...	...	...	...	...	...
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3	....	..	....	....	1	....	2	....	1	....	1	...	...	...	1	...	...	1	1	2	...	...	...
92	8	5	1	....	4	3	3	3	1	5	11	4	8	3	2	8	12	19	18	9	1	2	2
4	1	1	....	....	....	1	1	....	....	....	1	...	...	...	...	...	...	...	...	...	...	...	...
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21	1	..	....	....	....	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
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17	2	1	1	....	....	....	....	....	....	....	....	...	...	...	...	1	...	6	1	2	...	...	...
11	4	1	....	....	....	....	1	2	....	1	3	...	2	...	1	2	...	5	5	...	1	...	...
6	....	1	....	....	....	1	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
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1	....	..	....	....	....	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
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1	....	..	....	....	....	....	....	....	....	1	2	...	...	...	...	...	...	...	...	...	...	...	...
1	....	..	....	....	....	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
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19	....	..	....	....	....	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
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....	....	..	....	....	....	....	....	....	1	1	1	1	...	3	1	1	...	...	...	...	...	...	...
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....	....	..	....	....	....	....	....	....	....	1	1	1	...	3	1	1	...	...	...	...	...	...	...
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TABLE No. 5.—Deaths According to Cause, Sex,

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.				Nativity.		
		Male.	Female.	Single.	Married.	Widowed.	Divorced.	Milwaukee.	U. S. other than Mil.	Foreign.
TOTAL—All Causes	323	180	143	149	116	57	1	134	54	135
GENERAL DISEASES	97	54	43	50	34	13	.....	45	17	35
Typhoid Fever	5	5	.....	4	1	.....	.....	2	1	2
Measles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Scarlet Fever	1	1	.....	1	.....	.....	.....	1	.....	.....
Whooping Cough	7	3	4	7	.....	.....	.....	7	.....	.....
Diphtheria & Membranous Croup.	9	5	4	9	.....	.....	.....	9	.....	.....
Other Epidemic Diseases	4	.....	4	1	2	1	.....	.....	3	1
Pulmonary Tuberculosis	35	22	13	12	19	4	.....	10	7	18
Other Tubercular Diseases	7	6	1	5	1	1	.....	5	.....	2
Cancer	16	7	9	.....	9	7	.....	.....	4	12
Other General Diseases	13	5	8	11	2	.....	.....	11	2	.....
LOCAL DISEASES	201	106	95	94	66	40	1	86	29	86
Meningitis	9	4	5	9	.....	.....	.....	7	2	.....
Apoplexy	16	10	6	.....	8	7	1	.....	3	13
Other Dis. of Brain & Membranes	6	3	3	3	3	.....	.....	2	3	1
Paralysis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Convulsions	11	8	3	11	.....	.....	.....	11	.....	.....
Other Nervous Disease	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Organic Heart Diseases	14	3	11	2	8	4	.....	2	1	11
Other Dis. of Circulatory System.	3	2	1	1	1	1	.....	.....	2	1
Bronchitis	14	7	7	8	2	4	.....	8	.....	6
Pneumonia	23	13	10	5	10	8	.....	6	4	13
Broncho-pneumonia	4	2	2	3	.....	1	.....	3	.....	1
Asthma	5	3	2	.....	4	1	.....	.....	1	4
Pleurisy	1	1	.....	1	.....	.....	.....	1	.....	.....
Other Respiratory Diseases	4	4	.....	4	.....	.....	.....	4	.....	.....
Gastritis	5	3	2	2	3	.....	.....	2	2	1
Diarrhœal Diseases	12	9	3	11	1	.....	.....	11	.....	1
Appendicitis and Peritonitis	8	5	3	5	2	1	.....	2	4	2
Hernia and Intestinal Obstruction	1	.....	1	.....	1	.....	.....	.....	.....	1
Cirrhosis of Liver	2	.....	2	.....	.....	2	.....	.....	.....	2
Other Digestive Diseases	4	1	3	3	1	.....	.....	2	.....	2
Nephritis	12	7	5	3	7	2	.....	3	1	8
Other Urinary Diseases	4	4	.....	1	1	2	.....	.....	1	3
Dis. of Female Generative System	4	.....	4	1	3	.....	.....	.....	2	2
Puerperal Septicæmia	7	.....	7	.....	7	.....	.....	1	1	5
Other Diseases of Pregnancy	2	.....	2	.....	2	.....	.....	.....	.....	2
Dis. of Skin and Cellular Tissue	1	1	.....	1	.....	.....	.....	1	.....	.....
Locomotor System	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Malformations	1	1	.....	1	.....	.....	.....	1	.....	.....
Congenital Debility	19	11	8	19	.....	.....	.....	19	.....	.....
Senile Debility	9	4	5	.....	2	7	.....	.....	2	7
VIOLENCE	24	20	4	5	15	4	.....	3	7	14
Suicides	10	10	.....	2	7	1	.....	1	1	18
Accidents	13	10	3	3	7	3	.....	2	5	6
Homicides	1	.....	1	.....	1	.....	.....	.....	1	.....
Other Causes and Ill-Defined	1	.....	1	.....	1	.....	.....	.....	1	.....

Social Condition, Nativity and Age, For April, 1901.

AGE.																							
Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	90 to 95.	95 to 100.
73	15	6	2	4	12	9	10	6	7	17	17	18	14	15	12	15	12	19	21	10	5	4	...
15	4	3	2	3	5	2	6	3	3	4	7	6	5	5	3	4	4	5	5	3	...	...	...
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2	3	..	....	1	1	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
1	1	2	....	2	3	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
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....	....	..	....	....	....	1	4	3	3	2	4	4	4	3	2	2	...	2	...	1	...	...	...
3	....	1	....	....	....	....	1	....	....	....	....	...	...	...	...	1	...	...	1	...	...	...	...
....	....	..	....	....	....	....	....	....	....	....	1	1	...	...	1	1	1	3	3	3	2	...	...
9	....	..	....	....	1	....	....	....	....	1	1	...	1	...	...	...	...	...	...	...	...	...	...
58	11	3	....	1	5	7	3	2	4	12	8	6	5	8	6	10	8	13	16	7	4	4	...
1	2	1	....	1	2	2	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
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2	....	1	....	....	....	....	....	....	....	....	....	1	...	...	1	...	...	1	...	...	...	...	...
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9	1	..	....	....	....	1	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
....	....	..	....	....	....	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
1	....	..	....	....	....	1	....	....	....	....	2	1	1	1	1	1	2	...	1	1	...	1	...
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7	1	..	....	....	....	....	....	....	....	....	....	...	...	...	1	1	1	...	2	1	...	...	...
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3	....	..	....	....	....	....	....	....	....	....	....	...	...	...	1	...	...	...	...	...	...	...	...
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1	1	..	....	....	....	....	....	....	....	....	....	...	...	1	...	1	...	1	...	...	...	...	...
9	2	..	....	....	....	....	....	....	....	....	....	...	...	...	1	...	...	...	...	...	...	...	...
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TABLE No. 6.—Deaths According to Cause, Sex,

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.				Nativity.		
		Male.	Female.	Single.	Married.	Widowed.	Divorced.	Milwaukee.	U. S. other than Mil.	Foreign.
TOTAL—All Causes	294	176	118	127	117	50	.....	120	50	124
GENERAL DISEASES	104	60	44	47	48	9	.....	40	27	37
Typhoid Fever	8	5	3	3	5	.....	.....	3	3	2
Measles	2	2	.....	2	.....	.....	.....	2	.....	.....
Scarlet Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Whooping Cough	1	1	.....	1	.....	.....	.....	1	.....	.....
Diphtheria & Membranous Croup.	8	6	2	8	.....	.....	.....	5	2	1
Other Epidemic Diseases	2	.....	2	.....	.....	2	.....	.....	.....	2
Pulmonary Tuberculosis	46	27	19	21	24	1	.....	20	12	14
Other Tubercular Diseases	11	7	4	6	5	.....	.....	5	4	2
Cancer	14	4	10	1	9	4	.....	.....	4	10
Other General Diseases	12	8	4	5	5	2	.....	4	2	6
LOCAL DISEASES	173	99	74	72	62	39	.....	73	22	78
Meningitis	6	3	3	4	2	.....	.....	5	.....	1
Apoplexy	13	10	3	3	7	3	.....	1	3	9
Other Dis. of Brain & Membranes	1	1	.....	.....	1	.....	.....	.....	1	.....
Paralysis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Convulsions	4	1	3	4	.....	.....	.....	4	.....	.....
Other Nervous Diseases	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Organic Heart Diseases	21	15	6	2	11	8	.....	2	4	15
Other Dis. of Circulatory System.	5	3	2	.....	2	3	.....	.....	.....	5
Bronchitis	12	6	6	9	1	2	.....	9	.....	3
Pneumonia	26	19	7	10	14	2	.....	9	6	11
Broncho-pneumonia	1	1	.....	1	.....	.....	.....	1	.....	.....
Asthma	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pleurisy	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Respiratory Diseases	2	.....	2	1	.....	1	.....	1	.....	1
Gastritis	3	3	.....	3	.....	.....	.....	3	.....	.....
Diarrhœal Diseases	4	3	1	4	.....	.....	.....	2	2	.....
Appendicitis and Peritonitis	8	4	4	3	4	1	.....	6	.....	2
Hernia and Intestinal Obstruction	4	.....	4	.....	3	1	.....	.....	2	2
Cirrhosis of Liver	3	2	1	.....	2	1	.....	1	.....	2
Other Digestive Diseases	5	3	2	1	2	2	.....	2	1	2
Nephritis	17	8	9	4	4	9	.....	3	1	13
Other Urinary Diseases	1	1	.....	.....	1	.....	.....	.....	.....	1
Dis. of Female Generative System	1	.....	1	.....	1	.....	.....	.....	.....	1
Puerperal Septicæmia	2	.....	2	.....	2	.....	.....	.....	.....	2
Other Diseases of Pregnancy	2	.....	2	.....	2	.....	.....	2	.....	.....
Dis. of Skin and Cellular Tissue	4	2	2	3	.....	1	.....	2	.....	2
Locomotor System	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Malformations	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Congenital Debility	20	10	10	20	.....	.....	.....	20	.....	.....
Senile Debility	8	4	4	.....	3	5	.....	.....	2	6
VIOLENCE	15	15	.....	6	7	2	.....	5	1	9
Suicides	4	4	.....	.....	3	1	.....	.....	.....	4
Accidents	11	11	.....	6	4	1	.....	5	1	5
Homicides	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Causes.. and Ill-Defined	2	2	.....	2	.....	.....	.....	2	.....	.....

Social Condition, Nativity and Age, For May, 1901.

AGE.																						
Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	90 to 95.	95 to 100.
51	8	3	3	4	11	3	18	14	12	11	19	18	7	17	12	14	15	18	14	15	5	2	...
10	1	..	....	2	7	1	11	10	9	6	8	6	3	6	9	3	5	5	1	...	...	1	...
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41	6	3	2	2	2	1	4	4	2	4	10	11	3	10	3	11	9	12	13	14	5	1	...
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6	2	..	1	....	....	....	....	....	....	....	....	...	...	...	...	...	1	...	2	...	...	...	...
3	1	1	....	....	....	1	1	1	....	....	1	1	...	3	1	4	1	1	2	4	...	...	...
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....	1	..	1	....	1	1	2	....	1	1	1	1	...	...	...	...	...	...	...	1	...	...	...
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TABLE No. 7.—Deaths According to Cause, Sex,

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.				Nativity.		
		Male.	Female.	Single.	Married.	Widowed.	Divorced.	Milwaukee.	U. S. other than Mil.	Foreign.
TOTAL—All Causes	270	153	117	132	104	33	1	118	40	112
GENERAL DISEASES	94	48	46	34	1	9	.....	32	22	40
Typhoid Fever	5	2	3	1	4	.....	.....	4	1	....
Measles	4	4	.....	4	.....	.....	.....	4	.....	.....
Scarlet Fever	1	1	.....	1	.....	.....	.....	1	.....	.....
Whooping Cough	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diphtheria & Membranous Croup.	5	2	3	5	.....	.....	.....	4	1	.....
Other Epidemic Diseases	1	1	.....	1	.....	.....	.....	.....	1	.....
Pulmonary Tuberculosis	37	18	19	14	21	2	.....	12	8	17
Other Tubercular Diseases	7	4	3	6	1	.....	.....	5	1	1
Cancer	23	12	11	1	18	4	.....	1	6	16
Other General Diseases	11	4	7	1	7	3	.....	1	4	6
LOCAL DISEASES	154	89	65	88	45	20	1	81	15	58
Meningitis	4	4	.....	4	.....	.....	.....	4	.....	.....
Apoplexy	13	6	7	1	8	4	.....	.....	2	11
Other Dis. of Brain & Membranes	4	2	2	3	1	.....	.....	2	1	1
Paralysis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Convulsions	9	6	3	9	.....	.....	.....	9	.....	.....
Other Nervous Disease	2	2	.....	1	1	.....	.....	.....	.....	2
Organic Heart Diseases	11	7	4	3	6	2	.....	1	1	9
Other Dis. of Circulatory System.	1	.....	1	.....	1	.....	.....	.....	1	.....
Bronchitis	11	7	4	6	1	4	.....	6	.....	5
Pneumonia	16	10	6	5	7	3	1	7	1	8
Broncho-pneumonia	5	2	3	5	.....	.....	.....	5	.....	.....
Asthma	4	3	1	.....	3	1	.....	.....	.....	4
Pleurisy	2	2	.....	.....	2	.....	.....	.....	.....	2
Other Respiratory Diseases	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gastritis	1	1	.....	1	.....	.....	.....	1	.....	.....
Diarrhœal Diseases	15	7	8	15	.....	.....	.....	14	1	.....
Appendicitis and Peritonitis	6	3	3	4	2	.....	.....	1	5	.....
Hernia and Intestinal Obstruction	3	2	1	1	1	1	.....	1	.....	2
Cirrhosis of Liver	3	3	.....	.....	2	1	.....	.....	.....	3
Other Digestive Diseases	2	2	.....	1	1	.....	.....	1	.....	1
Nephritis	7	5	2	2	4	1	.....	1	2	4
Other Urinary Diseases	2	2	.....	.....	1	1	.....	.....	1	1
Dis. of Female Generative System	4	.....	4	.....	3	1	.....	1	.....	3
Puerperal Septicæmia	1	.....	1	.....	1	.....	.....	.....	.....	1
Other Diseases of Pregnancy	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dis. of Skin and Cellular Tissue	1	.....	1	1	.....	.....	.....	1	.....	.....
Locomotor System	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Malformations	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Congenital Debility	26	13	13	26	.....	.....	.....	26	.....	.....
Senile Debility	1	.....	1	.....	.....	1	.....	.....	.....	1
VIOLENCE	19	16	3	10	8	1	.....	5	3	11
Suicides	5	3	2	.....	5	.....	.....	.....	.....	5
Accidents	14	13	1	10	3	1	.....	5	3	6
Homicides	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Causes and Ill-Defined	3	.....	3	.....	.....	3	.....	.....	.....	3

Social Condition, Nativity and Age For June, 1901.

AGE.																						
Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	90 to 95.	95 to 100.
65	7	8	3	2	5	5	6	14	17	15	14	14	11	15	16	5	15	15	9	7	2	...	...
2	2	3	3	1	2	2	2	6	11	11	6	5	5	9	9	1	8	2	2	2	...	...	...
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63	5	5	...	1	2	3	3	6	3	1	5	8	5	3	6	3	6	13	7	4	2	...	...
1	...	...	...	1	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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12	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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TABLE No. 8.—Deaths According to Cause, Sex,

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.				Nativity.		
		Male.	Female.	Single.	Married.	Widowed.	Divorced.	Milwaukee.	U. S. other than Mil.	Foreign.
TOTAL—All Causes	315	180	135	168	104	40	3	147	58	110
GENERAL DISEASES	78	45	33	32	40	5	1	24	23	31
Typhoid Fever	10	6	4	4	6	.....	.....	3	3	4
Measles	1	.....	1	1	.....	.....	.....	1	.....	.....
Scarlet Fever	3	2	1	3	.....	.....	.....	3	.....	.....
Whooping Cough	1	1	.....	1	.....	.....	.....	1	.....	.....
Diphtheria & Membranous Croup.	2	2	.....	2	.....	.....	.....	1	1	.....
Other Epidemic Diseases	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pulmonary Tuberculosis	31	18	13	12	17	1	1	7	10	14
Other Tubercular Diseases	6	3	3	4	2	.....	.....	4	2	.....
Cancer	17	10	7	1	12	4	.....	.....	6	11
Other General Diseases	7	3	4	4	3	.....	.....	4	1	2
LOCAL DISEASES	207	114	93	121	54	31	1	115	27	65
Meningitis	7	4	3	7	.....	.....	.....	5	1	1
Apoplexy	16	7	9	.....	7	9	.....	.....	3	13
Other Dis. of Brain & Membranes	4	2	2	2	1	1	.....	2	.....	2
Paralysis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Convulsions	9	6	3	9	.....	.....	.....	9	.....	.....
Other Nervous Disease	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Organic Heart Diseases	14	9	5	5	4	4	1	1	4	9
Other Dis. of Circulatory System.	6	4	2	2	3	1	.....	1	.....	5
Bronchitis	8	5	3	6	1	1	.....	7	.....	1
Pneumonia	4	3	1	2	1	1	.....	2	.....	2
Broncho-pneumonia	3	3	.....	2	1	.....	.....	2	.....	1
Asthma	1	1	.....	.....	.....	1	.....	.....	.....	1
Pleurisy	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Respiratory Diseases	1	1	.....	.....	1	.....	.....	.....	.....	1
Gastritis	2	1	1	1	1	.....	.....	2	.....	.....
Diarrhœal Diseases	50	28	22	49	1	.....	.....	46	3	1
Appendicitis and Peritonitis	8	5	3	3	4	1	.....	3	1	4
Hernia and Intestinal Obstruction	5	2	3	.....	5	.....	.....	.....	1	4
Cirrhosis of Liver	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Digestive Diseases	9	4	5	5	3	1	.....	5	4	.....
Nephritis	7	6	1	.....	5	2	.....	1	2	4
Other Urinary Diseases	3	3	.....	.....	3	.....	.....	1	1	1
Dis. of Female Generative System	3	.....	3	.....	3	.....	.....	.....	3	.....
Puerperal Septicæmia	3	.....	3	.....	3	.....	.....	.....	1	2
Other Diseases of Pregnancy	1	.....	1	.....	1	.....	.....	.....	.....	1
Dis. of Skin and Cellular Tissue.	1	1	.....	1	.....	.....	.....	1	.....	.....
Locomotor System	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Malformations	1	1	.....	1	.....	.....	.....	1	.....	.....
Congenital Debility	26	10	16	26	.....	.....	.....	26	.....	.....
Senile Debility	15	8	7	.....	6	9	.....	.....	3	12
VIOLENCE	29	21	8	14	10	4	1	7	8	14
Suicides	7	5	2	5	2	.....	.....	1	4	2
Accidents	21	16	5	9	7	4	1	6	4	11
Homicides	1	.....	1	.....	1	.....	.....	.....	.....	1
Other Causes and Ill-Defined	1	.....	1	1	.....	.....	.....	1	.....	.....

Social Condition, Nativity and Age, For July, 1901.

AGE.																							
Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	90 to 95.	95 to 100.
97	9	2	5	5	7	5	12	12	15	7	12	18	16	12	10	10	16	11	15	11	4	2	2
3	3	1	....	2	4	3	7	3	9	5	4	6	6	4	4	3	5	3	3	...	...	...	...
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93	6	1	5	2	1	1	4	6	4	....	4	8	7	6	5	7	11	7	11	11	3	2	2
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TABLE No. 9.—Deaths According to Cause, Sex,

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.				Nativity.		
		Male.	Female.	Single.	Married.	Widowed.	Divorced.	Milwaukee.	U. S. other than Mil.	Foreign.
TOTAL—All Causes	385	208	177	230	114	39	2	212	49	124
GENERAL DISEASES	92	46	46	31	48	13	.....	31	14	47
Typhoid Fever	6	2	4	2	4	.....	.....	.....	3	3
Measles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Scarlet Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Whooping Cough	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diphtheria & Membranous Croup	4	3	1	4	.....	.....	.....	3	1	.....
Other Epidemic Diseases	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pulmonary Tuberculosis	30	16	14	10	16	4	.....	13	7	10
Other Tubercular Diseases	11	6	5	8	1	2	.....	8	1	2
Cancer	21	6	15	.....	16	5	.....	.....	1	20
Other General Diseases	20	13	7	7	11	2	.....	7	1	12
LOCAL DISEASES	269	144	125	189	54	25	1	172	32	65
Meningitis	11	4	7	9	2	.....	.....	7	3	1
Apoplexy	7	2	5	.....	5	2	.....	1	1	5
Other Dis. of Brain & Membranes	2	1	1	1	.....	1	.....	.....	1	1
Paralysis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Convulsions	8	6	2	8	.....	.....	.....	8	.....	.....
Other Nervous Disease	1	.....	1	1	.....	.....	.....	.....	1	.....
Organic Heart Diseases	14	5	9	.....	9	5	.....	2	1	11
Other Dis. of Circulatory System.	3	2	1	1	1	1	.....	1	1	1
Bronchitis	6	3	3	5	1	.....	.....	4	.....	2
Pneumonia	9	4	5	3	3	2	1	1	3	5
Broncho-pneumonia	1	1	.....	.....	.....	1	.....	.....	.....	1
Asthma	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pleurisy	1	1	.....	1	.....	.....	.....	1	.....	.....
Other Respiratory Diseases	1	1	.....	1	.....	.....	.....	1	.....	.....
Gastritis	1	1	.....	1	.....	.....	.....	1	.....	.....
Diarrhœal Diseases	107	64	43	106	1	.....	.....	101	4	2
Appendicitis and Peritonitis	9	3	6	5	4	.....	.....	2	3	4
Hernia and Intestinal Obstruction	4	2	2	1	2	1	.....	1	1	2
Cirrhosis of Liver	4	3	1	.....	2	2	.....	.....	.....	4
Other Digestive Diseases	11	6	5	5	6	.....	.....	4	3	4
Nephritis	11	7	4	2	6	3	.....	2	2	7
Other Urinary Diseases	2	2	.....	.....	2	.....	.....	.....	.....	2
Dis. of Female Generative System	3	.....	3	.....	3	.....	.....	.....	3	.....
Puerperal Septicæmia	1	.....	1	.....	1	.....	.....	.....	.....	1
Other Diseases of Pregnancy	2	.....	2	1	1	.....	.....	1	1	.....
Dis. of Skin and Cellular Tissue	4	.....	4	1	2	1	.....	1	.....	3
Locomotor System	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Malformations	1	1	.....	1	.....	.....	.....	.....	1	.....
Congenital Debility	35	21	14	35	.....	.....	.....	33	2	.....
Senile Debility	10	4	6	1	3	6	.....	.....	1	9
VIOLENCE	24	18	6	10	12	1	1	9	3	12
Suicides	6	5	1	1	5	.....	.....	2	.....	4
Accidents	18	13	5	9	7	1	1	7	3	8
Homicides	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Causes and Ill-Defined	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Social Condition, Nativity and Age, For August, 1901.

AGE.																							
Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	90 to 95.	95 to 100.
142	22	5	4	3	11	15	9	8	15	12	15	14	17	15	14	9	14	11	16	11	1	2	...
5	2	1	2	....	3	5	6	3	6	8	8	8	7	8	6	2	3	3	4	2	...	...	...
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3	1	..	....	....	....	3	....	....	....	1	2	1	...	2	3	...	...	2	1	1	...	...	...
136	20	4	2	2	6	6	2	5	8	3	6	5	9	5	5	5	10	7	11	9	1	2	...
1	1	1	....	....	3	3	....	....	....	....	....	...	1	...	1	...	...	...	...	...	...	...	...
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TABLE No. 10.—Deaths According to Cause, Sex,

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.				Nativity.		
		Male.	Female.	Single.	Married.	Widowed.	Divorced.	Milwaukee.	U. S. other than Mil.	Foreign.
TOTAL—All Causes	316	169	147	196	71	47	2	172	34	110
GENERAL DISEASES	75	44	31	45	20	10	.....	31	7	37
Typhoid Fever	5	3	2	4	1	.....	.....	4	.....	1
Measles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Scarlet Fever	1	.....	1	1	.....	.....	.....	1	.....	.....
Whooping Cough	1	1	.....	1	.....	.....	.....	1	.....	.....
Diphtheria & Membranous Croup	7	4	3	7	.....	.....	.....	6	1	.....
Other Epidemic Diseases	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pulmonary Tuberculosis	20	14	6	12	7	1	.....	7	3	10
Other Tubercular Diseases	8	3	5	6	2	.....	.....	5	1	2
Cancer	21	10	11	5	9	7	.....	.....	1	20
Other General Diseases	12	9	3	9	1	2	.....	7	1	4
LOCAL DISEASES	214	106	108	141	40	32	1	132	24	58
Meningitis	8	4	4	7	1	.....	.....	7	1	.....
Apoplexy	12	5	7	1	5	6	.....	2	2	8
Other Dis. of Brain & Membranes	5	3	2	2	1	1	1	2	1	2
Paralysis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Convulsions	12	6	6	12	.....	.....	.....	12	.....	.....
Other Nervous Disease	3	2	1	1	1	1	.....	2	.....	1
Organic Heart Diseases	9	2	7	2	4	3	.....	1	1	7
Other Dis. of Circulatory System	4	2	2	.....	3	1	.....	.....	1	3
Bronchitis	9	4	5	5	1	3	.....	5	1	3
Pneumonia	13	6	7	6	4	3	.....	7	1	5
Broncho-pneumonia	2	1	1	2	.....	.....	.....	2	.....	.....
Asthma	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pleurisy	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Respiratory Diseases	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gastritis	4	3	1	4	.....	.....	.....	4	.....	.....
Diarrhœal Diseases	60	27	33	59	1	.....	.....	56	3	1
Appendicitis and Peritonitis	7	2	5	5	1	1	.....	3	3	1
Hernia and Intestinal Obstruction	3	1	2	1	.....	2	.....	.....	1	2
Cirrhosis of Liver	2	2	.....	.....	2	.....	.....	.....	1	1
Other Digestive Diseases	6	5	1	1	4	1	.....	1	.....	5
Nephritis	10	7	3	.....	6	4	.....	.....	5	5
Other Urinary Diseases	4	3	1	2	1	1	.....	1	.....	3
Dis. of Female Generative System	3	.....	3	3	.....	.....	.....	.....	2	1
Puerperal Septicæmia	1	.....	1	.....	1	.....	.....	.....	.....	1
Other Diseases of Pregnancy	3	.....	3	.....	3	.....	.....	.....	.....	3
Dis. of Skin and Cellular Tissue	3	2	1	3	.....	.....	.....	2	1	.....
Locomotor System	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Malformations	1	1	.....	1	.....	.....	.....	1	.....	.....
Congenital Debility	24	14	10	24	.....	.....	.....	24	.....	.....
Senile Debility	6	4	2	.....	1	5	.....	.....	.....	6
VIOLENCE	25	19	6	9	10	5	1	8	3	14
Suicides	5	2	3	1	1	2	1	.....	1	4
Accidents	20	17	3	8	9	3	.....	8	2	10
Homicides	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Causes and Ill-Defined	2	.....	2	1	1	.....	.....	1	.....	1

Social Condition, Nativity and Age, For September, 1901.

AGE.																							
Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	90 to 95.	95 to 100.
107	26	10	2	3	8	2	6	16	13	8	6	11	12	9	16	11	9	12	12	13	4	...	...
8	2	1	2	3	3	2	5	10	7	2	3	3	4	2	4	4	1	3	4	2	...	...	...
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99	22	6	...	...	3	...	...	5	5	4	3	6	5	5	9	5	8	8	7	10	4	...	...
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TABLE No. 11.—Deaths According to Cause, Sex,

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.				Nativity.		
		Male.	Female.	Single.	Married.	Widowed.	Divorced.	Milwaukee.	U. S. other than Mil.	Foreign.
TOTAL—All Causes	275	139	136	131	94	48	2	116	52	107
GENERAL DISEASES	86	42	44	38	37	11	.....	33	21	32
Typhoid Fever	6	4	2	3	3	.....	.....	3	2	1
Measles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Scarlet Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Whooping Cough	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diphtheria & Membranous Croup	10	5	5	10	.....	.....	.....	9	1	.....
Other Epidemic Diseases	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pulmonary Tuberculosis	37	16	21	17	16	4	.....	13	12	12
Other Tubercular Diseases	2	1	1	1	.....	1	.....	2	.....	.....
Cancer	17	8	9	1	14	2	.....	.....	4	13
Other General Diseases	14	8	6	6	4	4	.....	6	2	6
LOCAL DISEASES	176	85	91	90	50	35	1	82	24	70
Meningitis	6	5	1	5	1	.....	.....	4	1	1
Apoplexy	12	8	4	1	8	3	.....	.....	3	9
Other Dis. of Brain & Membranes	1	1	.....	.....	1	.....	.....	.....	.....	1
Paralysis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Convulsions	9	7	2	9	.....	.....	.....	9	.....	.....
Other Nervous Disease	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Organic Heart Diseases	19	9	10	4	5	9	1	4	6	9
Other Dis. of Circulatory System.	4	.....	4	.....	2	2	.....	.....	.....	4
Bronchitis	7	3	4	5	2	.....	.....	4	1	2
Pneumonia	22	12	10	8	8	6	.....	8	3	11
Broncho-pneumonia	3	1	2	3	.....	.....	.....	2	1	.....
Asthma	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pleurisy	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Respiratory Diseases	1	1	.....	.....	1	.....	.....	.....	.....	1
Gastritis	3	1	2	3	.....	.....	.....	3	.....	.....
Diarrhœal Diseases	21	13	8	21	.....	.....	.....	21	.....	.....
Appendicitis and Peritonitis	2	2	.....	1	1	.....	.....	.....	.....	2
Hernia and Intestinal Obstruction	2	1	1	.....	2	.....	.....	.....	.....	2
Cirrhosis of Liver	5	2	3	1	4	.....	.....	.....	2	3
Other Digestive Diseases	6	2	4	5	.....	1	.....	5	.....	1
Nephritis	14	3	11	1	9	4	.....	1	3	10
Other Urinary Diseases	1	1	.....	.....	1	.....	.....	.....	1	.....
Dis. of Female Generative System	3	.....	3	1	2	.....	.....	1	2	.....
Puerperal Septicæmia	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Diseases of Pregnancy	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dis. of Skin and Cellular Tissue	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Locomotor System	1	.....	1	1	.....	.....	.....	1	.....	.....
Malformations	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Congenital Debility	19	7	12	19	.....	.....	.....	19	.....	.....
Senile Debility	15	6	9	2	3	10	.....	.....	1	14
VIOLENCE	13	12	1	3	7	2	1	.....	6	7
Suicides	4	4	.....	.....	4	.....	.....	.....	1	3
Accidents	9	8	1	3	3	2	1	.....	5	4
Homicides	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Causes and Ill-Defined	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Social Condition, Nativity and Age, For October, 1901.

AGE.																						
Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	90 to 95.	95 to 100.
70	8	3	4	6	6	3	9	10	14	8	9	14	10	12	12	21	14	19	14	7	2	...	...
4	3	..	3	3	4	2	6	8	9	3	5	6	5	3	6	6	2	3	3	1	1	...	...
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66	5	3	1	3	1	1	2	1	5	3	2	7	5	7	3	13	12	18	11	6	1	...	...
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....	....	..	....	....	1	....	1	....	....	2	2	1	...	2	2	2	...	...	...	...	...	...	...
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TABLE No. 12.—Deaths According to Cause, Sex,

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.				Nativity.		
		Male.	Female.	Single.	Married.	Widowed.	Divorced.	Milwaukee.	U. S. other than Mil.	Foreign.
TOTAL—All Causes	317	180	137	151	122	42	2	133	44	140
GENERAL DISEASES	83	44	39	38	33	10	2	30	15	38
Typhoid Fever	5	3	2	1	3	1	.....	1	1	3
Measles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Scarlet Fever	2	1	1	2	.....	.....	.....	2	.....	.....
Whooping Cough	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diphtheria & Membranous Croup	10	4	6	10	.....	.....	.....	9	1	.....
Other Epidemic Diseases	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pulmonary Tuberculosis	39	20	19	13	20	4	2	9	10	20
Other Tubercular Diseases	4	2	2	3	1	.....	.....	2	1	1
Cancer	11	6	5	2	6	3	.....	2	1	8
Other General Diseases	12	8	4	7	3	2	.....	5	1	6
LOCAL DISEASES	205	114	91	106	71	28	.....	99	24	82
Meningitis	11	8	3	8	3	.....	.....	7	2	2
Apoplexy	11	9	2	4	6	1	.....	2	1	8
Other Dis. of Brain & Membranes	3	2	1	1	2	.....	.....	1	.....	2
Paralysis	2	1	1	1	1	.....	.....	1	.....	1
Convulsions	4	3	1	4	.....	.....	.....	4	.....	.....
Other Nervous Disease	1	1	.....	1	.....	.....	.....	1	.....	.....
Organic Heart Diseases	16	7	9	1	13	2	.....	3	6	7
Other Dis. of Circulatory System	6	2	4	1	2	3	.....	1	3	2
Bronchitis	18	12	6	9	6	3	.....	8	.....	10
Pneumonia	21	11	10	11	8	2	.....	8	.....	13
Broncho-pneumonia	6	3	3	4	1	1	.....	4	1	1
Asthma	1	.....	1	.....	1	.....	.....	.....	.....	1
Pleurisy	1	.....	1	1	.....	.....	.....	1	.....	.....
Other Respiratory Diseases	2	1	1	1	1	.....	.....	1	.....	1
Gastritis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diarrhœal Diseases	18	7	11	15	2	1	.....	15	1	2
Appendicitis and Peritonitis	8	2	6	6	1	1	.....	6	1	1
Hernia and Intestinal Obstruction	3	3	.....	1	1	1	.....	1	.....	2
Cirrhosis of Liver	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Digestive Diseases	6	3	3	3	3	.....	.....	3	.....	3
Nephritis	13	8	5	4	7	2	.....	2	6	5
Other Urinary Diseases	2	2	.....	.....	.....	2	.....	.....	.....	2
Dis. of Female Generative System	3	.....	3	.....	3	.....	.....	1	.....	2
Puerperal Septicæmia	3	.....	3	.....	3	.....	.....	1	.....	2
Other Diseases of Pregnancy	3	.....	3	.....	3	.....	.....	.....	1	2
Dis. of Skin and Cellular Tissue	2	.....	2	1	.....	1	.....	1	.....	1
Locomotor System	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Malformations	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Congenital Debility	28	20	8	28	.....	.....	.....	27	1	.....
Senile Debility	13	9	4	1	4	8	.....	.....	1	12
VIOLENCE	27	21	6	7	16	4	.....	4	4	19
Suicides	8	7	1	2	5	1	.....	.....	2	6
Accidents	19	14	5	5	11	3	.....	4	2	13
Homicides	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Causes and Ill-Defined	2	1	1	.....	2	.....	.....	.....	1	1

Social Condition, Nativity and Age, For November, 1901.

AGE.																							
Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	90 to 95.	95 to 100.
70	13	2	2	4	9	4	13	14	13	17	18	24	11	18	9	12	13	11	15	16	6	2	1
5	4	..	1	....	6	1	7	7	7	7	7	6	6	3	2	2	3	3	2	3	1	...	...
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1	....	..	....	....	....	....	1	....	....	1	....	...	1	...	...	...	...	...	...	...	...	...	...
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2	....	..	....	....	....	....	1	....	3	....	1	1	...	...	...	...	1	1	1	...	1	...	...
64	9	2	1	3	3	3	5	5	4	8	9	15	2	11	6	9	8	7	11	12	5	2	1
4	2	..	....	1	....	....	1	....	....	....	....	1	...	1	...	...	1	...	...	...	...	...	...
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1	....	..	....	....	....	....	....	....	....	1	....	...	...	...	...	...	...	1	...	...	...	...	...
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4	....	..	....	....	....	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
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6	2	..	....	....	1	....	....	....	....	....	....	...	...	1	...	...	2	1	2	2	1	...	...
....	2	..	....	1	1	....	1	1	1	1	2	3	...	3	2	1	...	1	1	...	...	...	...
3	....	1	....	....	....	....	....	....	....	....	....	1	...	...	...	...	...	...	1	...	...	...	...
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13	2	..	....	....	....	....	....	....	....	....	....	...	...	...	...	1	...	...	...	...	1	1	...
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1	....	..	....	....	....	....	....	....	....	....	....	...	...	...	1	...	...	...	...	...	1	...	...
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2	....	..	....	....	....	....	....	....	....	....	....	2	...	...	1	...	1	...	...	...	...	...	...
1	....	..	....	1	....	....	....	....	1	2	....	2	...	3	...	2	...	1	...	...	...	...	...
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28	....	..	....	....	....	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
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1	....	..	....	1	....	....	1	2	1	2	2	3	3	4	1	1	2	...	2	1	...	...	...
....	....	..	....	....	....	....	....	1	....	....	1	2	1	1	1	...	1	...	...	...	...	...	...
1	....	..	....	1	....	....	1	1	1	2	1	1	2	3	...	1	1	...	2	1	...	...	...
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TABLE No. 13.—Deaths According to Cause, Sex,

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.				Nativity.		
		Male.	Female.	Single.	Married.	Widowed.	Divorced.	Milwaukee.	U. S. other than Mil.	Foreign.
TOTAL—All Causes	291	149	142	128	114	49	.....	110	40	141
GENERAL DISEASES	78	37	41	37	36	5	.....	36	13	29
Typhoid Fever	3	2	1	.....	3	.....	.....	.....	1	2
Measles	2	1	1	2	.....	.....	.....	2	.....	.....
Scarlet Fever	1	1	.....	1	.....	.....	.....	1	.....	.....
Whooping Cough	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diphtheria & Membranous Croup.	12	7	5	12	.....	.....	.....	10	2	.....
Other Epidemic Diseases	3	2	1	.....	3	.....	.....	.....	1	2
Pulmonary Tuberculosis	28	12	16	13	14	1	.....	15	5	8
Other Tubercular Diseases	8	5	3	6	2	.....	.....	5	1	2
Cancer	13	5	8	.....	11	2	.....	2	2	9
Other General Diseases	8	2	6	3	3	2	.....	1	1	6
LOCAL DISEASES	201	103	98	86	72	43	.....	72	23	106
Meningitis	4	3	1	3	1	.....	.....	3	.....	1
Apoplexy	14	7	7	1	8	5	.....	1	1	12
Other Dis. of Brain & Membranes	9	4	5	4	4	1	.....	2	3	4
Paralysis	3	.....	3	.....	1	2	.....	.....	1	2
Convulsions	10	6	4	10	.....	.....	.....	10	.....	.....
Other Nervous Disease	2	2	.....	2	.....	.....	.....	1	1	.....
Organic Heart Diseases	22	11	11	4	10	8	.....	1	2	19
Other Dis. of Circulatory System.	6	3	3	1	3	2	.....	1	.....	5
Bronchitis	21	9	12	13	4	4	.....	12	2	7
Pneumonia	29	16	13	8	15	6	.....	5	3	21
Broncho-pneumonia	9	5	4	4	2	3	.....	2	2	5
Asthma	1	.....	1	.....	1	.....	.....	.....	.....	1
Pleurisy	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Respiratory Diseases	2	.....	2	2	.....	.....	.....	1	1	.....
Gastritis	2	1	1	2	.....	.....	.....	1	.....	1
Diarrhœal Diseases	5	5	.....	5	.....	.....	.....	5	.....	.....
Appendicitis and Peritonitis	3	3	.....	2	1	.....	.....	2	1	.....
Hernia and Intestinal Obstruction	3	1	2	.....	1	2	.....	.....	1	2
Cirrhosis of Liver	6	5	1	1	4	1	.....	.....	.....	6
Other Digestive Diseases	7	2	5	3	3	1	.....	3	1	3
Nephritis	9	5	4	2	4	3	.....	2	.....	7
Other Urinary Diseases	2	2	.....	.....	2	.....	.....	.....	1	1
Dis. of Female Generative System	2	.....	2	.....	2	.....	.....	1	1	.....
Puerperal Septicæmia	3	.....	3	.....	3	.....	.....	.....	.....	3
Other Diseases of Pregnancy	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dis. of Skin and Cellular Tissue	1	.....	1	.....	.....	1	.....	.....	.....	1
Locomotor System	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Malformations	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Congenial Debility	19	10	9	19	.....	.....	.....	19	.....	.....
Senile Debility	7	3	4	.....	3	4	.....	.....	2	5
VIOLENCE	12	9	3	5	6	1	.....	2	4	6
Suicides	2	2	.....	1	1	.....	.....	.....	2	.....
Accidents	9	7	2	3	5	1	.....	2	1	6
Homicides	1	.....	1	1	.....	.....	.....	.....	1	.....
Other Causes and Ill-Defined	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Social Condition, Nativity and Age, For December, 1901.

AGE.																							
Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	90 to 95.	95 to 100.
54	18	3	3	4	8	2	10	15	8	11	8	11	7	16	18	20	24	12	23	8	7	1	...
2	10	1	1	3	5	....	5	8	5	5	3	3	2	5	3	5	6	2	2	1	1	...	...
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1	4	1	1	3	2	....	....	....	....	....	....	....	...	....	...	...	...	...	...	...	...	...	...
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....	....	..	....	....	....	....	4	7	4	4	1	2	2	1	1	1	1	...	...	...	...	...	...
1	3	..	....	....	2	....	....	....	....	....	....	....	...	1	...	...	1	...	...	...	...	...	...
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52	7	2	1	1	3	2	5	6	2	4	4	7	4	11	15	15	17	9	20	7	6	1	...
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1	....	..	....	....	1	....	1	....	....	....	....	....	1	1	...	2	...	...	2	...	...	...	...
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1	....	..	....	....	....	....	....	....	....	1	....	....	...	....	...	...	...	...	...	...	...	...	...
....	....	..	....	....	....	....	....	2	....	....	....	2	...	1	4	2	3	1	6	1	...	...	...
....	....	..	....	....	....	1	....	....	....	....	....	....	...	1	1	1	...	...	...	1	...	1	...
8	3	..	....	1	....	....	....	....	....	....	....	....	1	...	1	1	3	...	2	1	...	...	...
1	2	..	....	....	1	....	2	3	1	1	1	1	...	2	1	2	4	2	4	...	1	...	...
1	2	..	....	....	....	....	....	....	....	....	....	....	...	....	...	1	1	3	...	...	1	...	...
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3	....	..	....	....	....	....	....	....	....	....	1	....	...	1	1	...	...	...	...	1	...	...	...
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19	....	..	....	....	....	....	....	....	....	....	....	....	...	....	...	...	...	...	...	...	...	...	...
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....	1	..	1	....	....	....	....	1	1	2	1	1	1	...	...	...	1	1	1	...	...	...	...
....	....	..	....	....	....	....	....	1	1	....	....	....	...	....	...	...	...	...	...	...	...	...	...
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TABLE No. 14.—Showing, by Wards, the Estimated Population, some of the more important causes, for the year 1901.

WARDS.	Population.	Number of Deaths.	Annual Death Rate per Thousand.	Deaths Under One Year of Age.	Deaths, One to Five Years of Age.
First	9,660	90	9.32	10	6
Second	10,100	98	9.70	19	5
Third	5,520	62	11.23	15	7
Fourth	10,870	127	11.68	16	4
Fifth	10,210	141	13.81	35	18
Sixth	13,940	176	12.62	40	13
Seventh	7,290	84	11.52	11	2
Eighth	10,790	134	12.42	32	12
Ninth	18,010	209	11.60	55	17
Tenth	17,350	192	11.07	35	18
Eleventh	22,360	285	12.75	95	35
Twelfth	13,480	173	12.84	65	16
Thirteenth	17,370	200	11.51	66	14
Fourteenth	21,100	318	15.07	162	45
Fifteenth	12,930	121	9.36	18	12
Sixteenth	9,990	96	9.61	9	3
Seventeenth	10,430	133	12.75	39	12
Eighteenth	14,180	167	11.82	42	10
Nineteenth	10,660	113	10.60	20	12
Twentieth	17,180	185	10.76	54	17
Twenty-first	12,420	158	12.72	49	20
Twenty-second	10,260	113	11.01	24	17
Twenty-third	8,900	78	8.76	22	6
Hospitals	.....	380	.....	68	8
Total	295,000	3,833	12.99	1,001	329

Total Deaths, Annual Death Rate, and the Number of Deaths from

CAUSES OF DEATH.															
Typhoid Fever.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria.	Small Pox.	Tubercular Dis	Cancer.	Nervous System.	Circulatory System.	Bronchitis.	Pneumonia.	Nephritis.	Diarrhœa, Under Five Years.	Violence.	WARDS.
5	....	....	....	....	....	9	4	13	12	2	9	3	5	2	First
1	....	....	....	1	....	17	4	10	9	6	3	1	9	9	Second
....	....	....	....	1	....	9	2	13	3	8	5	3	1	4	Third
1	....	....	1	2	....	25	6	16	11	2	9	5	3	14	Fourth
....	2	1	....	6	....	12	7	21	6	10	6	3	19	10	Fifth
4	1	3	1	11	....	21	9	26	13	6	14	8	10	5	Sixth
2	....	....	....	1	....	9	4	9	13	2	2	2	4	10	Seventh
1	....	....	1	6	....	15	7	18	8	10	6	4	11	12	Eighth
2	4	2	....	8	....	30	10	24	18	9	16	8	15	6	Ninth
4	....	....	2	7	....	31	13	25	16	13	11	7	10	4	Tenth
5	1	....	3	8	....	45	14	31	17	18	15	6	30	9	Eleventh
....	....	....	1	4	....	24	7	24	5	3	12	7	21	13	Twelfth
4	1	....	1	4	....	26	10	26	9	6	11	7	15	8	Thirteenth
8	3	1	6	1	....	19	7	20	12	26	24	6	65	9	Fourteenth
2	1	2	....	5	....	14	7	15	15	6	7	7	1	12	Fifteenth
3	....	....	....	....	....	7	9	14	6	....	11	8	2	7	Sixteenth
4	....	3	2	2	....	14	9	7	6	3	6	3	18	11	Seventeenth
6	....	....	1	3	....	13	4	22	13	4	21	15	9	8	Eighteenth
2	....	1	....	2	....	21	5	18	5	3	21	3	6	1	Nineteenth
....	....	....	1	8	....	30	11	17	14	13	12	7	14	8	Twentieth
1	....	1	....	9	....	11	7	25	10	8	12	5	9	10	Twenty-first
2	....	1	....	4	....	20	11	12	8	4	12	5	9	6	Twenty-second
1	....	....	1	2	....	13	7	3	4	1	3	1	8	5	Twenty-third
5	4	1	....	5	1	38	32	34	10	13	24	8	17	46	Hospitals
63	17	16	21	100	1	473	206	443	243	176	272	132	311	229	Total

TABLE No. 15.—Showing, by months, the Number of Deaths, occurring in the various Public and Private Institutions, Hospitals, Reformatories etc., for the year 1901.

Hospitals and Institutions.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Children's Free Hospital	1	....	....	1	....	....	1	1	....	....	1	2	7
City Isolation Hospital	....	....	....	....	....	1	....	....	....	....	....	....	1
German Hospital	....	1	....	....	1	....	....	1	2	....	....	....	5
House of Mercy	....	....	....	....	....	....	1	....	1	....	....	1	3
Johnston Emergency Hospital	4	....	1	7	2	2	3	2	4	2	5	2	34
Knowlton Hospital	....	....	....	....	4	2	....	1	1	2	1	....	11
Lakeside General Hospital	1	....	....	2	2	....	1	1	....	1	....	....	8
Little Sisters of the Poor	....	3	2	2	1	2	2	....	1	1	3	1	18
Milwaukee Hospital	5	4	5	5	3	3	5	7	7	4	5	1	54
Milwaukee Infants' Home	1	1	2	....	1	....	....	....	....	....	....	....	5
Notre Dame Convent	....	2	2	1	2	1	....	2	....	....	....	....	10
Protestant Home for Aged	....	....	1	....	....	1	....	....	....	1	....	....	3
Riverside Sanitarium	....	....	1	....	....	....	....	....	1	....	2	....	4
St. John's Home	1	....	....	....	....	....	....	....	1	....	....	....	2
St. Joseph's Hospital	4	3	1	6	4	4	2	3	4	5	4	3	43
St. Mary's Hospital	6	4	6	3	6	5	5	5	5	1	6	5	57
St. Mary's Sanitarium	....	1	....	....	....	....	....	....	1	....	....	....	2
St. Rose Orphan Asylum	....	....	....	....	....	....	....	....	....	....	1	1	2
St. Vincent Orphan Asylum	5	2	7	6	5	3	2	7	3	1	3	1	45
Trinity Hospital	9	2	5	6	6	4	3	4	4	4	5	5	57
*Wisconsin General Hospital	....	....	....	1	2	....	....	....	....	....	1	....	4
Other Institutions	....	....	....	....	2	....	....	....	....	1	2	....	5
Total	37	23	33	40	41	28	25	34	35	23	39	22	380

*Now used by city for contagious diseases.

TABLE No. 16.

Showing Nativity of those dying in the city during 1901.

UNITED STATES.		FOREIGN.	
Milwaukee	1,732	Austria	25
Wisconsin, other than Milwaukee	229	Bavaria	9
Alabama	2	Bohemia	26
Connecticut	6	Buenos Ayers	1
Illinois	37	Canada	30
Indiana	8	Denmark	5
Iowa	6	England	45
Kentucky	2	France	6
Maine	15	Germany	977
Massachusetts	13	Holland	15
Michigan	25	Ireland	121
Minnesota	7	Italy	7
Missouri	6	Norway	26
New Hampshire	3	Nova Scotia	2
New Jersey	8	Poland	180
New York	89	Prussia	5
Ohio	20	Russia	13
Pennsylvania	20	Scotland	10
Rhode Island	2	Sweden	4
Tennessee	2	Switzerland	15
Vermont	12	Syria	1
Virginia	2	Wales	5
Other of United States	52	Other Foreign Countries	7
Total	2,298	Total	1,535
Grand Total			3,833

TABLE No. 17.—Showing, by months, the deaths for

MONTH AND SEX.	Total for Month.	Social Condition.				Nativity.		
		Single.	Married.	Widowed.	Divorced.	Milwaukee.	Unit. States	Foreign.
January—								
Male	217	109	79	26	2	95	31	90
Female	174	81	58	35	1	79	26	70
February—								
Male	164	86	61	17	.....	74	17	73
Female	153	72	39	40	2	70	20	63
March—								
Male	168	94	52	21	1	82	21	65
Female	171	76	56	37	2	71	32	68
April—								
Male	180	94	61	24	1	79	28	73
Female	143	55	55	33	.....	55	26	62
May—								
Male	176	81	73	22	.....	76	24	76
Female	118	46	44	28	.....	44	26	48
June—								
Male	153	80	60	12	1	65	19	69
Female	117	52	44	21	.....	53	21	43
July—								
Male	180	95	66	18	1	85	34	61
Female	135	73	38	22	2	62	24	49
August—								
Male	208	143	50	13	2	130	24	54
Female	177	87	64	26	.....	82	25	70
September—								
Male	169	105	42	20	2	91	17	61
Female	147	91	29	27	.....	81	17	49
October—								
Male	139	71	54	12	2	59	26	54
Female	136	60	40	36	.....	57	26	53
November—								
Male	180	89	69	21	1	78	21	81
Female	137	62	53	21	1	55	23	59
December—								
Male	149	71	66	12	.....	58	20	71
Female	142	57	48	37	.....	52	20	70
Total by Sexes—								
Male	2083	1118	733	218	13	972	282	828
Female	1750	812	568	363	8	760	284	707
Grand Total	3833	1930	1301	581	21	1732	566	1535

each Sex, according to Social Condition, Nativity and Age.

AGE AT DEATH.																							
Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	90 to 95.	95 to 100.
49	16	7	3	4	8	1	8	5	6	3	8	7	10	6	9	10	7	16	13	15	6	...	...
42	8	2	4	1	6	3	7	10	4	5	7	7	4	8	6	9	8	10	10	7	5	1	...
47	6	4	2	2	8	3	3	3	2	6	6	7	7	7	8	6	3	8	19	3	...	2	...
37	4	2	3	1	8	3	4	8	2	6	5	7	4	5	6	10	8	12	9	7	4	...	...
55	5	5	2	2	4	2	7	7	2	2	10	6	9	4	4	7	8	11	9	3	1	2	1
42	8	3	2	2	4	2	6	4	7	6	13	6	4	9	4	7	10	10	11	9	1	...	1
43	9	6	2	1	6	6	7	2	4	6	8	8	8	9	7	6	7	13	13	4	4	1	...
30	6	...	....	3	6	3	3	4	3	11	9	10	6	6	5	9	5	6	8	6	1	3	...
30	8	2	2	1	9	2	12	8	6	6	9	12	3	12	8	8	8	6	8	12	3	1	...
21	....	1	1	3	2	1	6	6	6	5	10	6	4	5	4	6	7	12	6	3	2	1	...
34	6	5	2	2	2	3	3	8	7	7	11	11	6	8	11	2	6	7	9	3	...	...	...
31	1	3	1	....	3	2	3	6	10	8	3	3	5	7	5	3	9	8	...	4	2	...	...
54	3	2	3	2	6	2	6	6	5	6	6	15	11	7	5	7	9	6	8	5	4	1	1
43	6	...	2	3	1	3	6	6	10	1	6	3	5	5	5	3	7	5	7	6	...	1	1
85	13	4	4	2	8	10	4	5	8	6	8	2	7	6	6	7	9	4	3	6	1	...	...
57	9	1	....	1	3	5	5	3	6	6	7	12	10	9	8	2	5	7	13	5	...	2	...
57	11	6	1	1	5	1	2	8	6	5	3	5	8	5	8	5	3	10	8	9	2	...	...
50	15	4	1	2	3	1	4	8	7	3	3	6	4	4	8	6	6	2	4	4	2	...	...
35	8	2	2	2	2	2	6	5	4	4	3	7	6	9	11	9	7	5	5	4	1	...	...
35	....	1	2	4	4	1	3	5	10	4	6	7	4	3	1	12	7	14	9	3	1	...	...
46	8	...	1	2	6	2	6	4	6	11	8	10	8	10	4	8	12	5	7	11	4	1	...
24	5	2	1	2	3	2	7	10	7	6	10	14	3	8	5	4	1	6	8	5	2	1	1
30	12	3	1	1	4	1	2	8	4	6	5	7	4	11	10	8	14	4	8	2	4	...	...
24	6	...	2	3	4	1	8	7	4	5	3	4	3	5	8	12	10	8	15	6	3	1	...
565	105	46	25	22	68	35	66	69	60	68	85	97	87	94	91	83	93	95	110	77	30	8	2
436	68	19	19	25	47	27	62	77	77	66	82	85	56	74	65	83	83	100	100	65	23	10	3
1001	173	65	44	47	115	62	128	146	137	134	167	182	143	168	156	166	176	195	210	142	53	18	5

TABLE No. 18.—Showing, by months, the Disposition in the various Cemeteries, and otherwise, of the bodies of those for whom burial or removal permits were issued during the year 1901.

CEMETERIES, ETC.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	Permits for Still Births.	Per. for Bodies brought to City.	Grand Total.
Union	104	72	75	82	66	67	71	85	66	59	81	65	893	82	108	1083
Forest Home	68	49	44	54	57	35	57	48	42	47	44	52	597	22	163	*782
Calvary	87	85	84	59	70	71	63	82	62	58	61	81	863	89	7	959
Polish Union	40	29	44	36	29	30	38	69	45	42	36	36	474	43	4	521
Pilgrims' Rest	26	27	28	30	21	19	30	37	28	22	26	18	312	31	5	348
Wanderer's Rest	16	13	14	12	10	15	7	17	17	12	15	12	160	16	2	178
Trinity	10	10	7	6	4	5	7	11	12	4	10	6	92	13	1	106
Greenwood	1	3	2	....	....	1	3	1	1	1	1	....	14	5	1	20
Spring Hill	2	....	3	4	3	....	....	3	2	1	....	2	20	3	....	23
Second Home	1	2	1	2	1	2	2	4	3	2	2	....	22	2	....	24
County Farm	5	....	2	2	6	3	5	1	4	....	2	4	34	7	9	50
For Shipment	30	27	35	35	27	21	32	27	33	25	38	14	344	11	16	371
For Anatomical Purpurses	1	....	....	1	....	1	....	....	1	2	1	1	8	4	2	14
Total	391	317	339	323	294	270	315	385	316	275	317	291	3833	328	318	4479

*Of this number 34 were for cremation.

BIRTHS.

TABLE No. 19.

Showing, by months, the Total Number Reported, their Color, Sex, and by Whom Reported, for the year 1901.

MONTHS.	Color.		Sex.		By Whom Reported.		Total.
	White.	Black.	Male.	Female.	Physician.	Midwife.	
January	612	2	312	302	206	408	614
February	569	.....	277	292	192	377	569
March	581	2	308	275	177	406	583
April	614	1	331	284	208	407	615
May	606	2	304	304	227	381	608
June	418	.....	203	215	159	259	418
July	724	.....	350	374	299	425	724
August	677	.....	356	321	232	445	677
September	592	.....	310	282	212	380	592
October	790	.....	388	404	299	491	790
November	512	1	258	255	182	331	515
December	711	1	352	360	200	512	712
Total	7,406	9	3,749	3,666	2,593	4,822	7,415

TABLE No. 20.—Showing, by months, the Nativity of Parents

PLACE OF BIRTH.	FATHERS.												
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Milwaukee	120	85	97	86	102	59	112	128	102	130	84	135	1,230
Wisconsin, other than Milwaukee	67	68	59	50	50	40	84	66	64	95	50	96	789
Other parts of United States	71	63	56	73	81	47	69	51	68	86	53	72	790
Germany	237	256	256	255	220	171	278	276	247	320	197	263	2,976
Other European Countries	116	94	110	137	164	99	176	149	110	147	126	150	1,578
Unknown or not stated	3	3	5	14	11	2	5	7	1	12	3	6	52
Total	614	569	583	615	608	418	724	677	592	790	513	712	7,415

of Children whose births were reported during the year 1901.

MOTHERS.													PLACE OF BIRTH.
January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	
117	106	128	122	142	72	149	125	139	175	104	168	1,647	..... Milwaukee
87	89	73	73	72	69	97	97	77	104	59	97	994	Wisconsin other than Milwaukee.
75	72	43	73	73	54	64	59	73	99	50	84	819	Other parts of United States.
239	209	242	230	180	152	262	264	211	199	187	247	2,622	..... Germany
96	92	96	116	139	71	146	132	92	209	111	114	1,314	Other European Countries.
.....	1	1	1	2	.....	6	.....	.....	4	2	2	19	Unknown or not stated
614	569	583	615	608	418	724	677	592	790	513	712	7,415	..... Total

TABLE No. 21.

Showing by Wards and by Months, the Births reported during the year 1901.

WARDS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total
First	6	7	3	3	9	7	11	5	7	9	4	10	81
Second	20	14	12	13	7	15	13	14	11	16	16	18	169
Third	2	15	8	5	16	5	25	12	10	17	4	2	121
Fourth	8	8	9	10	7	10	9	13	7	12	9	12	114
Fifth	11	12	15	13	8	9	13	24	10	19	9	10	153
Sixth	28	26	24	23	26	19	27	28	17	38	19	18	293
Seventh	2	6	3	5	4	3	2	6	4	....	5	3	43
Eighth	13	16	16	18	26	9	26	16	18	24	9	24	215
Ninth	30	27	42	52	51	28	34	36	36	36	37	57	466
Tenth	36	29	27	25	28	16	34	39	27	40	21	33	355
Eleventh	62	45	49	58	58	35	68	60	50	78	41	64	668
Twelfth	27	23	32	29	25	12	35	24	23	37	28	42	337
Thirteenth	33	36	39	43	34	28	41	40	38	57	34	39	462
Fourteenth	68	84	72	78	80	58	120	82	101	102	57	96	998
Fifteenth	17	13	12	13	15	3	22	23	18	15	10	20	181
Sixteenth	7	5	3	8	10	1	10	10	5	13	8	13	93
Seventeenth	37	15	28	16	19	15	26	38	29	37	24	26	310
Eighteenth	28	32	27	36	30	23	38	28	25	52	32	23	374
Nineteenth	38	25	19	29	21	18	20	24	35	16	19	22	286
Twentieth	45	38	44	46	34	34	36	46	37	44	42	55	501
Twenty-first	24	28	34	30	28	19	38	46	28	36	23	31	365
Twenty-second	27	21	19	20	26	23	25	26	19	33	17	30	286
Twenty-third	10	13	8	12	11	9	18	12	10	11	15	22	151
Not stated	35	31	38	30	35	19	33	35	27	48	30	42	393
Total	614	569	583	615	608	418	724	677	592	790	513	712	7415

TABLE No. 22.

Showing, by months, the Total Number of Births reported, the Birth Rate per 1,000, the Number of Males and Females, together with the Percentage of each.

MONTHS.	Number of Births Reported.	Birth Rate per 1000 Population.	Number of Males.	Number of Females.	Percentage of Males to Total.	Percentage of Females to Total.
January	614	24.56	312	302	50.8	49.2
February	569	25.08	277	292	48.7	51.3
March	583	23.32	308	275	52.8	47.2
April	615	25.43	331	284	53.8	46.2
May	606	24.24	304	304	50.1	49.9
June	418	17.28	203	215	48.5	51.5
July	724	28.96	350	374	48.3	51.7
August	677	27.08	356	321	52.6	47.4
September	592	24.49	310	282	52.4	47.6
October	790	31.60	388	404	49.1	50.9
November	515	21.30	258	255	50.1	49.9
December	712	28.48	352	360	49.4	50.6
Total	7,415	25.14	3,749	3,666	50.5	49.5

TABLE No. 23.

Showing for eight years—1894 to 1901—the Total Number of Births and Deaths, Birth and Death Rates, and Yearly Excess of Births over Deaths.

YEARS.	Population.	Births.	Deaths.	Excess of Births over Deaths.	Rate per 1000 Population.		Excess of Birth Rate over Death Rate.
					Births.	Deaths.	
1894	241,000	7,624	4,253	3,371	31.63	17.64	13.99
1895	250,000	7,813	3,885	3,928	31.25	15.54	15.71
1896	260,000	7,855	3,904	3,951	30.21	15.00	15.21
1897	275,000	7,642	3,606	4,036	27.79	13.11	14.68
1898	280,000	7,796	3,338	4,458	28.09	11.92	16.17
1899	285,000	7,544	3,843	3,701	26.47	13.48	12.99
1900	290,000	7,491	4,026	3,465	25.83	13.88	11.95
1901	295,000	7,415	3,833	3,582	25.14	12.99	12.15

MARRIAGES.

TABLE No. 24.

Showing, by months, the Total Number of Marriages Reported, the Color of the Contracting Parties, and the Ceremony by which the marriage was performed.

MONTHS.	Number of Marriages Reported.	Color.				Ceremony.					
		White.		Black.		Religious.			Civil.		
		Husband.	Wife.	Husband.	Wife.	Protestant.	Catholic.	Jewish.	Justice of Peace.	Judge.	Court Commissioner.
January	155	155	155	.....	.....	75	34	4	42	.....	.....
February	169	168	168	1	1	65	70	6	24	4	.....
March	89	89	89	.....	.....	43	15	4	26	1	.....
April	141	140	140	1	1	85	9	3	39	1	4
May	199	198	198	1	1	121	34	2	28	12	2
June	294	294	294	.....	.....	132	103	5	46	7	1
July	251	251	251	.....	.....	121	58	2	52	10	8
August	152	152	152	.....	.....	76	29	2	44	1	.....
September	219	219	219	.....	.....	95	73	7	38	4	2
October	318	318	318	.....	.....	123	105	5	79	.....	6
November	252	252	252	.....	.....	121	90	5	31	5	.....
December	221	221	221	.....	.....	107	72	6	28	5	3
Total	2460	2457	2457	3	3	1164	692	51	477	50	26

TABLE No. 25.

Showing, by months, the Total Number of Marriages Reported, and the Place of Residence of Husband.

MONTHS.	Total Number of Marriages Reported.	Residence of Husband.					
		Milwaukee.	Wisconsin, other than Milwaukee.	Chicago.	Illinois, other than Chicago.	Other Places.	Unknown or Not Stated
January	155	117	14	13	3	8	.....
February	169	132	14	11	1	11	.....
March	89	72	6	6	1	4	.....
April	141	116	13	7	1	4	.....
May	199	169	11	10	2	7	.....
June	294	250	17	9	1	17	.....
July	251	192	16	22	5	16	.....
August	152	123	13	5	1	10	.....
September	219	181	18	7	.....	12	1
October	318	265	14	20	1	16	2
November	252	216	19	10	5	2	.....
December	221	187	19	9	.....	5	1
Total	2460	2020	174	129	21	112	4

TABLE No. 26.

Showing, by months, the Total Number of Marriages Reported, with Birth-place of Contracting Parties.

MONTHS.	Number of Marriages Reported.	Birthplace of Parties.									
		Milwaukee		Wisconsin other than Milwaukee		Others of United States.		Foreign.		Unknown or Not Stated.	
		Husband	Wife.	Husband.	Wife.	Husband.	Wife.	Husband.	Wife.	Husband.	Wife.
January	155	36	54	26	33	31	19	62	49	.....	.....
February	169	37	57	28	28	29	22	75	61	.....	1
March	89	15	25	12	14	19	16	43	34	.....	.....
April	141	44	63	19	18	27	14	51	45	.....	1
May	199	48	61	33	37	32	22	86	78	.....	1
June	294	88	108	57	55	36	29	113	102	.....	.....
July	251	79	103	43	47	47	35	82	66	.....	.....
August	152	41	47	27	23	23	30	61	50	.....	2
September	219	65	75	39	31	35	28	80	84	.....	1
October	318	79	117	42	46	49	43	148	111	.....	1
November	252	67	89	53	43	32	29	100	91	.....	.....
December	221	61	86	42	40	31	21	86	74	1	.....
Total	2460	660	885	421	415	391	308	987	855	1	7

CONTAGIOUS DISEASES.

TABLE No. 27.

Showing, by months, the number of cases of, and deaths from the principal Contagious Diseases.

MONTHS.	DISEASES.											
	Diphtheria.		Scarlet Fever.		Typhoid Fever.		Measles.		Whooping Cough.		Small Pox.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
January	90	16	70	4	14	3	1	5	.....	2	3	.....
February	44	5	43	2	9	3	.....	2	.....	5	1	.....
March	42	12	62	1	9	4	2	1	.....	4	10	.....
April	37	9	29	1	18	5	7	.....	.....	7	2	.....
May	28	8	30	.....	20	8	24	2	.....	1	3	.....
June	18	5	24	1	16	5	50	4	.....	.....	4	1
July	12	2	20	3	16	10	33	1	.....	1	1	.....
August	20	4	8	.....	17	6	1	.....	.....	.....	1	.....
September	32	7	17	1	17	5	.....	.....	.....	1	1	.....
October	56	10	23	.....	31	6	12	.....	.....	.....	.....	.....
November	56	10	27	2	23	5	2	.....	.....	.....	.....	.....
December	48	12	19	1	15	3	24	2	.....	.....	4	.....
Total	483	100	372	16	205	63	156	17	.....	21	30	1

TABLE No. 28.

Showing the number of cases of, and deaths from the various Contagious Diseases for 12 Years, 1890 to 1901 inclusive.

YEARS.	DISEASES.											
	Diphtheria.		Scarlet Fever.		Typhoid Fever.		Measles.		Whooping Cough.		Small Pox.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1890	827	241	257	38	.....	73	.....	33	.....	8	1	.....
1891	1489	400	792	86	166	77	62	38	.....	76	.....	.....
1892	1193	400	559	76	196	76	94	21	.....	51	1	.....
1893	620	273	526	94	382	95	221	42	.....	12	1	.....
1894	436	165	176	12	249	70	478	69	.....	69	894	244
1895	375	179	144	5	204	63	11	1	.....	60	176	30
1896	919	254	120	4	133	46	281	29	.....	15	.....	.....
1897	708	138	89	3	109	31	289	36	.....	19	.....	.....
1898	343	61	108	2	132	46	23	2	.....	53	.....	.....
1899	722	109	1100	36	174	43	312	26	.....	9	14	3
1900	716	124	1726	70	340	59	403	36	.....	46	2	.....
1901	483	100	372	16	205	63	156	17	.....	21	30	1

TABLE NO. 29.

Showing by Wards the Cases of and Deaths from Diphtheria, Scarlet Fever, Typhoid Fever, Measles and Smallpox for the year 1901.

WARDS.	Diphtheria.		Scarlet Fever.		Typhoid Fever.		Measles.		Small Pox.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
First	18	.....	15	.....	10	5	2	.....	1	.....
Second	3	1	18	.....	9	1	10	.....	3	.....
Third	11	1	6	.....	2	.....	1	.....	1	.....
Fourth	11	2	11	.....	7	1	4	.....	4	.....
Fifth	16	6	14	1	1	.....	14	2	2	.....
Sixth	37	11	22	3	8	4	11	1	3	.....
Seventh	4	1	11	.....	10	2	3	.....	1	.....
Eighth	29	6	9	.....	9	1	16	.....	.....	.....
Ninth	37	8	25	2	3	2	6	4	.....	.....
Tenth	26	7	12	.....	7	4	4	.....	.....	.....
Eleventh	32	8	1	.....	16	5	9	1	.....	.....
Twelfth	24	4	6	.....	15	.....	5	.....	2	.....
Thirteenth	34	4	10	.....	13	4	10	1	.....	.....
Fourteenth	15	1	7	1	13	8	.....	3	.....	.....
Fifteenth	28	5	22	2	5	2	21	1	1	.....
Sixteenth	12	.....	16	.....	12	3	24	.....	2	.....
Seventeenth	13	2	15	3	5	4	.....	.....	2	.....
Eighteenth	23	3	42	.....	16	6	1	.....	.....	.....
Nineteenth	24	2	41	1	11	2	8	.....	1	.....
Twentieth	34	8	33	.....	6	.....	1	.....	.....	.....
Twenty-first	33	9	6	1	12	1	.....	.....	.....	.....
Twenty-second	8	4	22	1	5	2	2	.....	.....	.....
Twenty-third	6	2	4	.....	2	1	3	.....	.....	.....
Hospitals, etc.	5	5	4	1	8	5	1	4	7	1
Total	483	100	372	16	205	63	156	17	30	1

REPORT

OF

ANALYST.

REPORT OF ANALYST.

F. M. Schulz, M. D., Commissioner of Health:

DEAR SIR—I have the honor to submit the following report, showing the work done in the chemcial and bacteriological laboratories during the year 1901.

The work has been mainly along the lines pursued heretofore. In the matter of milk inspection we have extended our work more toward the dairies and first handlers of the milk, in the belief that, from a sanitary standpoint, at least, the milk is most apt to become a source of danger in these places.

During the latter part of the year notices were sent to all physicians in the city requesting them to report all cases of pulmonary tuberculosis occurring in their practice and stating that the department would examine sputum, free of charge.

Many physicians have availed themselves of this opportunity of an aid in their diagnoses, and the bacteriological work of the department has thereby been much increased.

Special work in bacteriology was done in connection with the public schools with a view to ascertaining the best method of sweeping. The results of this work were positive and gratifying as will be seen by the detailed report.

TABLE No. 1.

Number of milk dealers licensed during the year	1,011
Total samples of milk analyzed, Jan. 1, 1901—Jan. 1, 1902	6,274
Average per cent. of fat of 6,274 samples	3,732
Number of samples below 3% butter fat	234
Per cent. below 3%	3.73%
Average fat of 234 samples	2.69%
Average fat of 6,040 samples	3.77%
Total samples brought in by inspectors	4,238
Number samples below 3%	204
Per cent. below 3%	4.81%
Number samples brought in by private individuals	412
Average per cent. of fat of 412 samples	3.79%
Number samples below 3%	30
Per cent. below 3%	1.28%
Number samples from depot	2,664
Average per cent. of 2,664 samples	3.73%
Number of samples below 3%	67
Per cent. below 3%	2.52%
Number of samples of cream tested	1,574
Average per cent. of fat of 1,574 samples	19.64%
Number of arrests made	41
Amount of fines imposed	$350
Skimmed milk and butter milk analyzed	14
Gallons of milk confiscated	272

TABLE No. 2.

MONTH.	Samples Analyzed.	Average Fat.	Quarts.	Below 3 per cent.	Disposal.							Cream.		Average Fat.
					Depot.		Warned.	Private.	Dupli-cates.	Arrests.	Fines.	Depot.	Received.	
					Dum-ped.	No Act'n								
January	521	3.76	14,546	14	.....	.....	7	3	.....	4	$25 00	95	10	20.16
February	384	3.80	13,130	4	.....	.....	3	.....	.....	1	.....	126	8	19.73
March	472	3.58	15,566	13	5+2	1	3	4	.....	.....	.....	154	10	19.86
April	574	3.73	16,961	20	1	2	4	1	.....	13	150 00	129	11	19.98
May	577	3.65	16,471	13	.....	4	3	2	.....	4	25 00	129	7	20.31
June	494	3.56	15,140	25	2	2	11	1	1	8	75 00	154	5	20.00
July	559	3.60	17,782	32	8	6	10	5	.....	1	25 00	118	9	19.01
August	563	3.71	17,672	25	1	6	7	4	4	3	25 00	143	3	18.89
September	434	3.70	12,423	29	5	3	18	1	.....	2	.....	99	1	18.44
October	611	3.88	17,795	19	1	6	8	.....	1	3	.....	106	10	19.52
November	544	3.83	17,422	25	3+7	8	3	5	4	2	25 00	129	12	19.93
December	541	3.94	17,072	15	.....	4	7	4	.....	.....	.....	98	8	19.60
Total	6,274	3.732	191,980	234	25+9	42	86	30	10	41	$350 00	1480	94	19.64

TABLE No. 3. Table Showing Quality

SOURCE.	Number of Samples.				Average Fat.			
	1898	1899	1900	1901	1898	1899	1900	1901
City Dealers	5,475	3,655	3,345	3,198	3.75	3.74	3.76	3.72
Depots	583	2,007	1,972	2,664	3.80	3.80	3.81	3.73
Received	591	656	297	412	3.63	3.75	3.70	3.78
Total	6,919	6,318	5,614	6,274	3.74	3.76	3.77	3.73
Cream	102	276	908	1,574	17.80	20.95	19.46	19.64

of Milk From Various Sources.

Below 3.0 Per Cent.				Per Cent. Below 3.0 Per Cent.				Source.
1898	1899	1900	1901	1899	1899	1900	1901	
285	154	105	127	5.00	4.21	3.11	3.97	.....City Dealers
21	49	22	67	2.46	2.44	1.11	2.52	..... Depots
53	45	23	30	8.97	6.86	7.80	7.28	..... Received
353	248	150	234	5.12	3.92	2.67	3.73	..... Total

TABLE No. 4.

Summary of Disposal of Samples Below Standard.

Private individuals	30
Depot—Confiscated*	25
Not confiscated	42
Arrests—Below standard	40
Preservatives	1
Warned	86
Duplicates	10
Total	234

*Nine additional cans confiscated for causes other than being below 3%.

MILWAUKEE, WIS., Nov 27, 1901.

F. M. Schulz, M. D., Commissioner of Health:

DEAR SIR—I have the honor to submit the following report appertaining to the examination of the air after various methods of sweeping, in the Fourth and Sixth District schools, as requested by the school board.

In the Fourth District school three methods of sweeping were employed; 1st, kerosene oil brush; 2nd, ordinary dry broom, and 3rd, saw-dust swept up with broom. With each method three plates were exposed before sweeping, three immediately after sweeping, and two ten minutes after sweeping, the exposures being in each case one on either side of the room and one in the middle of the room, except where two plates were exposed, when the one in the middle was omitted.

In these tests it will be seen that the important part of the test is the difference in the amount of dust, as indicated by the number of bacteria before and immediately after sweeping. In the case of the kerosene oil brush, the number of bacteria before sweeping was 5 which was increased to 20 immediately after sweeping; in the case of the dry broom the number increased from 10 to 1165; in the case of the saw-dust with the broom, the increase was from none to 1320, showing that as compared with the other two methods, the kerosene oil brush raises practically no dust.

In the Sixth District school, six methods of sweeping were employed, under the same conditions as in the Fourth District with the exception that the exposures were made in corners diagonally opposite each other and in the middle instead of at the sides, and that the plates were exposed 12 inches from the floor instead of 24 as was the case at the Fourth District school. In addition to the methods of sweeping employed in the Fourth District school the dry brush, the ordinary brush dipped in kerosene oil, and the saw-dust swept up with a brush, were used. In this school the increase before sweeping and immediately after sweeping with the oil brush, was from 195 to 270; with the dry broom the increase was from 135 to 2295; with the saw-dust swept with the broom, from 390 to 6195; with the brush dipped in kerosene oil from 255 to 765; with the dry brush from 90 to 4095, and with the saw-dust swept with a brush from 210 to 975. It will be seen in these tests, as well as in those made in the Fourth District school, that the amount of dust raised with the kerosene oil brush and to a

less extent with the brush dipped in kerosene oil, is decidedly less than with the old methods. It should be said in this connection that the kerosene oil brush was freshly taken out of stock and had not become saturated with the oil during the first part of the sweeping, so that while it showed better results than any other of the methods, it did not keep the dust down as well as in the Fourth District test.

Contrary to the tests made in other places, the use of the saw-dust did not appear to as good advantage as the dry broom alone. This may have been due to the fact that the saw-dust was not wet enough, but in all cases where saw-dust was used, in addition to taking twice as long to do the sweeping, there was always left a considerable amount of saw-dust scattered on the floor, particularly about the feet of the desks which presented a very unsightly appearance and is condusive to the collection and dispersion of dust to a greater degree than would otherwise take place.

Another very important point should be noted and that is that in the Fourth District School where the brush had been constantly in use for over one year, the number of germs both before and after sweeping is exceedingly small, although the time since the last sweeping was practically the same as in the other school, and the other conditions so far as were observable were the same with the exception, which has been before mentioned, that the plates were exposed 24 inches from the floor instead of 12. Still this would not account for the enormous difference between 5 and 218 bacteria per sq. ft.

A few suggestions as to the deleterious effects of dust, or rather the effects of bacteria carried by dust, may not be inopportune. It was apparent from observation that in rooms swept by the old methods, a large amount of dust was raised even as high as the ceiling of the room, and that this dust in settling will fall on the tops of the desks, window casings and all projecting ledges, and that the removal of this dirt will consume a large amount of time on the part of the janitor, or in event of his failure to do this, currents of air will be continually sifting the dust down to the floor, and that, on the desks and seats will be wiped up by the hands and clothing of the pupils. The large amount of dust on the floor is constantly stirred up by the walking about of the pupils, and the inhalation of a large amount of dust, particularly when laden with disease germs, is extremely dangerous. It has been found that diphtheria germs will become dried on particles

of dust and will remain virulent in this condition for a long time. It is well known that the tubercle bacillus when dried retains its infective properties for very long periods, and that this is the usual way in which consumption is contracted, (i e. by the inhalation of tubercle bacilli).

While the germs of scarlet fever, measles, whooping cough, mumps, smallpox and chickenpox, have not been isolated, and their exact mode of distribution studied, it is unquestionably true that the above mentioned mode of dissemination holds good to a greater or less degree for these diseases. The ordinary pus microbes will also withstand drying, and when dried they retain their virulence. While it is not practicable to discover the germs of consumption and diphtheria by the methods which we have used, it is possible to discover the pus germs, and since we know that the germs of consumption are practically always present in the dust of public buildings, and that the germs of diphtheria may be frequently present, we may assume that the finding of pus germs in considerable quantities are indicative of the presence of the other disease germs and that suitable methods of cultivation would disclose them.

In the qualitative examination of the growths from these sweepings, 11 species of bacteria were isolated. No attempt was made to identify the different species of moulds. Of the 11 species of bacteria isolated, two were identified as belonging to the pathogenic (disease producing) bacteria. Three others were identified as saprophytes (harmless) and the remainder were unidentified.

I believe that these tests are conclusive enough to show that the use of the old methods of sweeping as compared with the new, that is with the use of kerosene oil, is neither aesthetic nor hygienic.

Respectfully submitted,

W. C. BENNETT, M. D.,

Bacteriologist.

COMPARATIVE TESTS OF AIR IN ROOMS BEFORE SWEEPING; FIRST, WHERE OIL BRUSH HAS BEEN USED FOR ONE YEAR, AND SECOND WHERE NO OIL HAS BEEN USED.

Fourth District School.		Sixth District School.	
Plates 24 inches from the floor.		Plates 12 inches from the floor.	
Per Plate.	Per Sq. Ft.	Per Plate.	Per Sq. Ft.
1	15	17 32	255 480
0	00	13 30	195 450
0	00	9 16	135 240
1	15	12 4	180 60
1	15	11 11	165 165
0	00	4 8	60 120
0	00	14 8	210 120
0	00	15 13	225 195
0	00	23 22	345 330
Average .33	Average 5	14.6	218

RESULT OF EXAMINATION OF AIR AFTER SWEEPING BY VARIOUS METHODS.

Sixth District School, Nov. 16, 1901.

		Average.	Average Per Sq. Ft.
Room 12 (A) swept with oil brush 12 minutes—			
Before sweeping,	17, 13, 9,	13	195
Immediately after sweeping,	16, 26, 11,	18	270
12 minutes after sweeping,	19, 17, 5,	14	210
Room 10 (B), dry broom, 17 minutes—			
Before sweeping,	12, 11, 4,	9	133
Immediately after sweeping,	43, 316, 100,	153	2,295
12 minutes after sweeping,	10, 2, 10,	7	105
Room 13 (C), brush dipped in oil, 12 minutes—			
Before sweeping,	14, 15, 23,	17	255
Immediately after sweeping,	67, 62, 23,	51	765
12 minutes after sweeping,	12, 18, 14,	15	225
Room 9 (D), sawdust with broom, 15 minutes—?			
Before sweeping,	32, 30, 16,	26	390
Immediately after sweeping,	310, 136, 794,	413	6,195
12 minutes after sweeping,	93, 75, 107,	92	1,380
Room 14 (E), dry brush, 8 minutes—			
Before sweeping,	4, 11, 8,	6	90
Immediately after sweeping,	378, 180, 242,	273	4,095
12 minutes after sweeping,	18, 22, 37,	25	390
Room 8 (F), sawdust with brush, 24 minutes—			
Before sweeping,	8, 13, 23,	14	210
Immediately after sweeping,	70, 68, 56,	65	975
12 minutes after sweeping,	38, 26, 39,	34	510

RESULT OF EXAMINATION OF AIR AFTER SWEEPING BY VARIOUS METHODS.

Fourth Districct School, Oct. 26, 1901.

				Average.	Average Per Sq. Ft.
Room (A) swept with oil brush, 8 minutes—					
Before sweeping,	1,	0,	0,	.3	5
Immediately after sweeping,	0,	1,	3,	1.3	20
10 minutes after sweeping,	0,	0,	0,	.0	0
Room (B), dry broom, 10½ minutes—					
Before sweeping,	1,	1,	0,	.6	10
Immediately after sweeping,	61,	61,	109,	77.0	1,165
10 minutes after sweeping,	3,	6,	0,	4.5	67.5
Room (C), sawdust with broom, 23 minutes—					
Before sweeping,	0,	0,	0,	0	0
Immediately after sweeping,	10,	9,	246,	88	1,320
10 minutes after sweeping,	4,	4,	7,	5	75

CHEMICAL ANALYSES, 1899-1900-1901.

	1899.	1900.	1901.
Milk	6,318	5,614	6,274
Cream	276	908	1,574
Lake water	18	72	5
Well water	120	155	136
Miscellaneous	67	25	35
Total	6,799	6,774	8,024

BACTERIOLOGICAL AND MICROSCOPICAL EXAMINATIONS, 1899-1900-1901.

	1899.	1900.	1901.
Diphtheria	162	417	382
Sputum	47	65	117
Typhoid (Widal test)	31	58	81
Lake water	00	64	00
Miscellaneous	29	34	106
Total	269	638	686

W. C. BENNETT, M. D.,
Analyst.

REPORT

OF

CHIEF SANITARY INSPECTOR.

REPORT OF CHIEF SANITARY INSPECTOR.

F. M. Schulz, M. D., Commissioner of Health:

I hereby submit for your annual report the following detailed statement of the work of the sanitary inspectors for the year ending April 15, 1902.

The inspectors have made 24,644 complaint reports, including reinspections, 87 stable reports, 15 ice reports and 2,475 citizen's complaints.

Based on these reports of the inspectors the department has issued 6,320 orders.

During the past fiscal year the department has tested 5,862 samples of milk collected by the inspectors, and 412 samples brought to the office by private parties; 5 samples of lake water and 136 samples of well water; 13 samples of meat and 12 of other food products.

The house to house inspections by subdistricts have been continued during the year.

All funerals of victims of diphtheria and scarlet fever have been attended by an inspector, who saw that they were strictly private.

One glandered horse was killed and disposed of under the supervision of the department.

The ordinance referring to cow stables within the city, has been rigorously enforced the past year. The department requires all orders to be obeyed before licenses to sell milk are granted.

Four inspectors are now inspecting all the stables in Milwaukee County outside of the city.

Many dairies outside of the county have been inspected by mutual request of owner and dealer, who wished to receive the suggestions of the department. We also gave a copy of the Dairy Rules issued by the United States Agricultural Department to the outlying dairies.

The meat and food inspectors have confiscated 162 calves, 28,506 pounds of meat and fish, 26,387 pounds of nuts, fruit and vegetables, and 650 pounds of eggs.

A truce in the ice-war having been agreed to, both companies have put up river ice from above the dam for "cooling purposes only." The department advises all persons not to use river ice for domestic purposes.

The ordinance prohibiting the building of any privy vaults, where water and sewer have been laid in street in front, and that all privy vaults maintained in the city must be water-tight, has enabled the department to compel the removal of 1,010 defective vaults, and action on 555 vaults is still pending, the time of removal having been extended to the first of next May.

Very many vaults were removed voluntarily by the owners anticipating an order from the department.

The following tables show the number and nature of the orders issued during the year.

ORDERS PERTAINING TO BAKERIES.

Clean bake shop	3
Clean floor	1
Provide cement or hardwood floor	19
Provide new ceiling	1
Provide stair for bakery	1
Rebuild chimney	1
Remove troughs	2
Whitewash bake shop	6

BUTCHER SHOPS.

Provide cement floor	1
Provide killing room	3
Provide new ice box	1
Reline ice box	1
Whitewash killing room	1

ORDERS PERTAINING TO BARNS.

Clean barns	1
Clean yard	1
Connect barn to sewer	8
Connect barn to tank	2
Connect milk house to sewer	1
Disinfect barn	1
Keep dog out of milk wagon	1
Provide cover for milk wagon	2
Provide light for barn	4

Provide new floor for milk house	1
Provide new floor for stable	6
Repair floor	2
Ventilate cow and livery barn	9
Whitewash barn	64

ORDERS PERTAINING TO PLUMBING, ETC.

A.

Clean sewer	66
Connect bar sink	3
Connect cistern	2
Connect catch basin	1
Connect garbage box	2
Connect ice box	18
Connect roof conductors	19
Connect sink	37
Connect vats	1
Provide sewer	5
Repair and relay sewer	36
Seal sewer	5

B.

Clean sink and waste pipe	4
Disconnect sink	1
Provide sink	2
Renew wood work of sink	2
Repair sink	4
Trap sink	39
Ventilate sink	1

C.

Extend vent pipe	1
Provide water	5
Remove latrines	1
Renew plumbing	14
Repair plumbing	122
Repair waste pipe	9
Repair water pipe	12

ORDERS PERTAINING TO VAULTS AND URINALS.

A.

Clean vault	2,189
Disinfect vault	15
Fill vault	1,012
Provide water-tight vault	14
Remove vault from lot line	2
Repair vault	1

B.

Clean urinal	5
Connect urinal	5
Provide flush for urinal	2
Provide urinal	4
Remove urinal	1
Renew urinal	3
Repair urinal	4

C.

Clean slop hopper	9
Provide slop hopper	2
Remove slop hopper	4
Renew slop hopper	2
Repair slop hopper	4
Repair trap of slop hopper	1

D.

Clean water closet	89
Lock water closet	1
Provide water closet	920
Provide water for water closet	45
Remove pan closet	11
Renew water closet	7
Renew woodwork of water closet	3
Repair water closet	35
Trap water closet	2
Unlock water closet	3

E.

Clean catch basin	6
Provide catch basin	14
Provide tile drain	6
Repair catch basin	2

ORDERS TO CEASE COMMITTING NUISANCE.

Cease assorting rags in alley	2
Cease burning rags	1
Cease burning hides and scrapings	1
Cease cleaning cuspidors	1
Cease draining fish barrel on sidewalk	1
Cease draining ice box into cellar	1
Cease draining into alley	1
Cease draining tannery refuse	1
Cease emitting dense smoke	1
Cease feeding horse in front of house	1

Cease filling vault	1
Cease finishing new vault	3
Cease selling milk	1
Cease throwing slops and waste water in alley	3
Cease throwing liquid into garbage box	1
Cease throwing slops in street	3
Cease throwing slops in yard	9
Cease throwing slops on roof	1
Cease throwing manure	2
Cease throwing night soil in yard	1
Cease using slop hopper	1

ORDERS PERTAINING TO GARBAGE AND MANURE NUISANCE.

A.

Clean garbage box	8
Disinfect garbage box	4
Extend garbage chute	1
Provide ash box	141
Provide cover for garbage box	2
Provide garbage box	310
Remove garbage box	6
Remove garbage chute	1
Repair garbage box	2

B.

Provide manure box	191
Provide cover for manure box	19
Raise manure box	1
Remove manure	120
Remove manure box	2
Repair manure box	8

MISCELLANEOUS ORDERS.

Bank house	7
Boil water before using	43
Clean alley	23
Clean and disinfect under floor	7
Clean and fill cistern	30
Clean rooms and keep clean	3
Clean and repair eave gutters and conductors	2
Clean and whitewash house	1
Clean cellar, basement and premises	33
Clean cistern	27
Clean dry well	1

Clean pen for poultry	4
Clean shed	3
Clean stairs	1
Clean well	1
Clean yard	56
Close elevator shaft	2
Close shed	2
Confine pigeons	2
Confine poultry	4
Cover cistern	9
Cover well	1
Destroy poison ivy	1
Disconnect eaves from dry well	1
Disconnect conductors	1
Disinfect basement	2
Disinfect car track	1
Disinfect premises	2
Disinfect under sidewalk	1
Drain basement and cellar	3
Extend chimney	19
Extend garbage chute	1
Fill cellar	2
Fill cesspool	4
Fill cistern	24
Fill ditch	1
Fill or drain lot	17
Fill well	117
Provide bins	1
Provide cistern	1
Provide cover for meter box	1
Provide dust collector	2
Provide eave gutters for house or barn	4
Provide muffler for gas engine	1
Provide new privy house	1
Provide retaining wall	1
Provide skylights for water closet	2
Provide ventilation	1
Provide ventilation for forge	1
Remove bill board	1
Remove bones	3
Remove chute	1
Remove cistern	31
Remove clothes	1
Remove cesspool	1
Remove dogs	2

Remove filth	22
Remove goat	7
Remove hogs	1
Remove pigeons	8
Remove poultry	23
Remove poultry coop	2
Remove potatoes from railroad yard	1
Remove rabbits	1
Remove rags	3
Remove rat	3
Remove rubbish and ashes	102
Remove shed	1
Remove tubs	1
Provide wooden drain	14
Renew chute	2
Renew floor	4
Repair cistern	4
Repair chimney	2
Repair cold air inlet	1
Repair dock	2
Repair eave gutters	24
Repair floor	5
Repair furnace	1
Repair gas exhaust	1
Repair privy	19
Repair roof	4
Repair roof conductors	27
Repair sidewalk	1
Repair stairs	1
Replace privy	1
Screen gables	1
Use smokeless fuel	2
Ventilate cellar	3
Whitewash chicken coop	3
Whitewash basement	2

Respectfully submitted,

TRUMAN H. CURTIS,
Chief Sanitary Inspector.

REPORT

OF

SECRETARY.

REPORT OF SECRETARY.

F. M. Schulz, M. D., Commissioner of Health:

In presenting a synopsis of the business transacted by the Health Department, I call your attention to the increase in the number of citizens' complaints for the year; to-wit: from 1,643 the previous year to 2,511 for the year 1901. Orders issued increased from 5,416 to 6,294, sanitary inspectors reports from 22,371 to 24,196; value of meat confiscations from $1,274.59 to $1,629.50. Weight from 25,016 pounds to 31,421. Value of fruit and vegetables was in 1900, $165.55, weight 28,350, against $837.27, weight 35,452 in 1901. In most other branches the increase is in proportion, viz: filling of wells 107 to 129; providing water closets to replace privy vaults 620 to 941, to make sewer connections 319 to 391. There was a falling off of scavenger work caused by people beginning to see the advantage of providing water closets in accordance with ordinance 6, passed January 15, 1900, and at the same time saving the expense of cleaning vaults every year or oftener.

On the following pages you will find a list of defective school houses, by which it will be seen that parochial schools have fewer defects than public school houses. Also the references made to other departments, the prosecutions for non-obeyance of orders, except milk, which are given in the report of the Chemist; petitions and actions taken thereon, abatement of nuisances on property owned by non-residents, and costs charged to taxes.

I also have prepared the title to ordinances affecting the health department since June 8th, 1896, when the general ordinances were adopted, and a list of all blanks used by the health office with the numbers attached so it may readily be found.

STATE LAWS.

To protect the public health of the City of Milwaukee.

Law relating to sale of ice.

An Act relating to bakeries and persons employed therein.

An Act to provide against adulteration of food and drugs.
An Act providing for the sale of pure milk and cream.
An Act to prevent adulteration of meat products.

ORDINANCES.

131. Inspection of bakeries, Aug. 17, 1896.
22. Cutting and selling of ice, March 15, 1897.
37. Amending Sec. 20, Chap. 15, general ordinances of 1896, relating to slaughter houses, butcher shops, etc., May 5, 1897.
109. Garbage crematory bonds, $120,000, Sept. 13, 1898.
23. Amending Sec. 21, as above, March 28, 1898.
21. Authority to issue garbage disposal bonds for $80,000, March 28.
74. To prevent throwing of glass, metal or other material, July 6, 1897.
4. Relating to management of Emergency Hospital, amending Secs. 60 and 64, Chap. 15, general ordinances of 1896, Jan. 31, 1898.
11. Collection of garbage from private residences, Feb. 14, 1898.
82. Forbidding throwing rubbish, etc., and to provide cover for ash and manure boxes, Aug. 29, 1898.
139. Above amended by allowing in alley 12 inches above ground, Sept. 24, 1900.
47. Amending Sec. 3, Chap. 103, relating to cow barns, May 8, 1899.
67. Appointment of two food and meat inspectors, July 18, 1898.
68. Amending Sec. 49, Chap. 15, general ordinances of 1896 (scavengers), Sept., 1898.
69. Amending Sec. 2 of smoke ordinance, passed Feb. 3, 1896, Aug. 1. (New amendment introduced Jan. 13, 1902.)
97. Ordinance regulating the sale of fruit, vegetables and farm produce, Oct. 10.
5. Amending Sec. 1 of above, exempting sail or steam vessels assessed in city, Jan. 16, 1899.
47. Amending Sec. 103, Chap. 3 of general ordinances, relating to barns, May 8, 1899.
147. Increasing salary of Registrar of Vital Statistics, Chap. 125, Dec. 4, 1899.
6. Amending Sec. 160, Chap. 3 of general ordinance 96, relating to privy vaults, Jan. 15, 1900.
23. Amending Sec. 6, Chap. 5, Chief Sanitary Inspector, $100.00, Feb. 26, 1900.
29. Ordinance distributing sample packages of drugs, May 14, 1900. (Amendment Sept. 9, 1901.)
108. Ordinance forbidding sale of horse or dog meat, July 2, 1900.
Ordinance regulating exposing of fruit, etc., for sale, also vegetables, groceries and confectionery, passed July 1.

PETITIONS, ETC.

March 11. Petition of Louis Wilk et al., for abatement of nuisance caused by tannery of Swan-Nelson Co., lots 17-18, block 205.

March 18. Eighteenth ward, Murrey's addition, referred to Commissioner of Health, who, on April 22, reported the bad condition as investigated by himself, King and Cunningham. Referred to committee on health.

July 17. Committee on health and local committee of the Eighteenth ward reported same for indefinite postponement.

June 1. John Ruppel and 9 others in block, for sewer on Thirty-fifth street, between Lee and North. (Sewer ordered.)

June 10. Des Forges and 76 others for removal of wreckage from Rohlfing & Sons' burned store, 413-417 Broadway. O. K. Aug. 30.

June 13. Petition of residents to have water hole on block 8, Henry Mann's subdivision, Seventeenth ward, filled up. Referred to committee on health and local committee, who reported it for indefinite postponement.

June 20. Petition of H. Emmerich for re-examination of well water at 610 Third street. O. K. Dec. 19.

July 8. Petition of Mrs. Eliza Casey and 12 others for abatement of nuisance on fur factory, Nelson & Co., No. 1605 Galena. Found O. K. Discharged July 16.

July 29. Petition of State and Town Board of Health in Wauwatosa, connecting sewer outlet in northwest ¼ section 25, contaminating the Menomonee river. Referred to committee on health. Report Aug. 12 by resolution referring matter to Commissioner of Health and Board of Public Works for investigation and report to Council.

Aug. 12. Petition of F. Sladell et al. for abatement of nuisance by Eclipse laundry, No. 1427 Fond du Lac avenue. Referred to committee on health Aug. 26. Referred to Commissioner of Health for investigation Sept. 9. Rereferred to committee on health Act. 21, Placed on file.

Resolution ordering inspection of grocery stores, butcher shops and kitchens in connection with restaurants, and all beer pipes, tubes and hose and air pipes as to cleanliness. Adopted May 20.

Oct. 11. Letter of Commissioner of Health to Chief of Police in relation to powers of police officers, Chap. 470 laws of 1885, as amended. And see Sec. 4, Chap 15, city charter.

Oct. 29. Letter to Board of Public Works, sewer needed in Hanover street, south of Maple and Burnham and east of Grand avenue. Sewers ordered built March 24, 1902.

Dec. 9. Letter to School Board recommending sweeping school room floors with oil instead of dry.

BUSINESS REPORT OF THE HEALTH DEPARTMENT FOR 1901.

No. complaints entered	6,848
General	3,507
Citizens'	2,501
Verbal	840
No. inspector's reports	24,665
No. orders issued by Commissioner	6,309
All obeyed but 522.	
No. milk venders licensed	1,064
No. pounds of meat confiscated	31,421
Valued at	$1,629.50
No. pounds of fruit and vegetables confiscated	3,553
Valued at	$846.27
No. of privies cleaned, private	2,999
No. of privies cleaned, compulsory	2,201
All obeyed but 121, or 6%.	
No. of scavenger permits issued	5,242
Night soil removed, yards	12,000
Cost of removal of night soil	$36,000
Public school house reports	205
No. of school houses found defective	36
Defective plumbing located	264
Defective plumbing remedied	165
Defective plumbing total examinations	289
No. vaults ordered filled up and water closets provided	941
No. sewer connection orders	391
All obeyed but 86, or 30%.	
Orders to fill wells	129
All obeyed but 52.	
No. orders to boil water	28
All obeyed.	
References to City Attorney	12
References to Board of Public Works	62
References to School Board	36
References to State Factory Inspector	1
References to State Veterinary Surgeon	4
References to Town Boards of Health	2
References to Water Department	7
References to Chief of Police	3
References to Building Inspector	13
References to Gas Light Company	4
References to Fire Department	1
References to Associated Charities	3

Petitions of resident owners for sewer or water pipe..... 6
Petition for abatement of nuisances caused by noncompliance with ordinances 2
Oct. 12. Petition of residents for building of livery barn on lot C. 12 block 6, Pierce addition, Thirteenth ward, granted..... 1
March 25. Petition of sanitary police for increase of salary, denied.
Prosecutions for violating city ordinances, 11 cases, figures aggregate $47.90
May 2. A nuisance of non-resident owner was abated at No. 204 Lyon street, charge to tax being..... $13.50
Sept. 27. Also at No. 1007 Teutonia street, charge to tax being..... $6.50

Letters of warning to comply with orders after owners had had a call notice without effect, were issued as follows: For abatement of nuisances 453, resulting in compliance with the original orders in 345 cases: in extensions until spring 1902, in 24 cases, leaving 83 orders to be enforced.

MONTH.	Number of Complaints	Citizen's Complaints.		Plumbing.		Orders to Remove Vaults.	Notice to Call.
		Unfounded.	Verified.	Defects.	Remedied.		
January	116	34	82	31	13	1	35
February	98	49	49	15	13	.....	14
March	147	45	102	14	11	.....	25
April	226	69	157	14	20	100	72
May	234	82	152	28	10	178	236
June	300	113	187	20	7	139	186
July	396	153	243	25	9	135	175
August	385	159	226	27	14	186	183
September	189	50	139	26	15	74	165
October	170	65	145	23	27	69	130
November	135	44	91	18	10	44	105
December	105	33	70	23	16	15	71
Total	2501	986	1603	264	165	941	1397

Unfounded, 35%: remedied, 60%.
1900—Orders to remove vaults, 835; notices to call, 1,124.

Forty-nine wells were filled out of 129 ordered, and in 28 cases the order was modified to boiling water, leaving 52 orders disregarded or 40%; 17 wells were condemned in connection with typhoid fever cases.

REPORT OF MEATS AND VEGETABLES CONFISCATED.

MONTH.	Sanitary Police Inspection.	MEATS, 1901. Number, 177.		MEATS, 1900 Number, 188.	
		Weight.	Value.	Weight.	Value.
January	1,193	1,624	$109 42	1,923	$119 21
February	941	1,177	72 68	1,897	115 24
March	1,103	2,112	140 60	2,116	137 43
April	1,852	1,326	73 97	2,247	137 40
May	3,527	7,943	269 18	3,032	122 09
June	2,653	2,327	113 75	841	49 99
July	2,406	3,896	202 30	1,737	115 90
August	2,673	1,632	87 30	2,475	133 65
September	2,265	1,593	94 60	1,111	66 91
October	2,190	4,153	274 09	2,023	165 70
November	1,868	1,914	102 00	530	32 25
December	2,000	1,724	89 70	1,084	78 82
Totals	24,665	31,421	$1,625 50	21,016	$1,274 59

Total fruit confiscated in 1901, 35,452 pounds; valued at $837.27.
Total fruit confiscated in 1900, 28,350 pounds; valued at $165.55.

CAUTIONARY NOTICES

Sent out by the Secretary Threatening Prosecution if Orders were not Complied With.

WARD.	Letters Sent.	General.		Vaults.		Total.		Dis-missed.
		Complied with.	Not Obeyed.	Complied with.	Not Obeyed.	Complied with.	Not Obeyed.	
1st	22	3	21	11	23	14	23	.....
2nd	15	7	8	.....	12	7	12	.....
3rd	14	9	7	2	8	12	8	.....
4th	51	20	31	21	40	41	40	1
5th	38	17	15	16	20	33	20	1
6th	34	13	21	7	28	20	28	4
7th	5	5	.....	.....	.....	5	.....	.....
8th	8	3	1	4	2	7	2	1
9th	23	10	9	9	9	19	9	2
10th	13	5	5	6	7	11	7	2
11th	10	3	4	3	6	6	6	.....
12th	24	9	10	12	12	21	12	1
13th	32	5	22	12	27	17	27	6
14th	13	6	7	4	7	10	7	.....
15th	11	1	10	6	11	7	11	.....
16th	13	3	7	6	9	9	9	.....
17th	14	6	8	6	8	12	8	.....
18th	10	3	3	6	4	9	4	1
19th	24	12	10	13	10	25	10	1
20th	28	14	12	9	14	23	14	.....
21st	23	11	8	6	10	17	10	3
22nd	24	7	11	8	13	15	13	1
23rd	4	5	.....	.....	.....	5	.....	.....
	452	177	230	168	50	345	280	24

Total orders involved..... 649
Total letters sent..... 453

Excess 196

Which is caused by general and vault orders being sent out in the same notice to same owners.

PROSECUTIONS.

1901.

Jan. 17. Jos. Blueme, Thirty-ninth and Lisbon avenue, for cleaning vault without license, $10.00.

Feb. 19. Geo. H. Farrington, 609-617 Cedar street, disobeying order to repair plumbing, costs.

March 15. Mrs. Barbara Nau, 588-590 East Water street, disobeying order to repair plumbing, $21.48.

July 30. Max. Flosczinski, scavenger No. 10, dumping night soil on place in Town of Lake other than marked on permit, $1.00.

Aug. 30. Henry Beulow, 894 Seventh street, disobeying order to provide water closet, etc., $10.00.

Sept. 12. Mrs. Wilhelmine Toppel, 1012 Humboldt avenue, disobeying order to provide water closet, etc., dismissed.

Sept. 23. Herman Jennrich, 2025 Elm street, disobeying order to clean vault, costs.

Nov. 12. Mrs. Catharine Shea, 918 Clybourn street, disobeying order to remove garbage, costs.

Oct. 24. M. H. V. Brand, 3125 North avenue, disobeying order to clean and fill vault, costs.

Dec. 5. P. H. Mueller, 1297 Hopkins road, disobeying order to clean vault and provide a box for same, costs.

Dec. 16. Alvin Brand, 768 North Water street, resisting confiscation of meat by meat inspector, $5.00.

Total number of prosecutions, except milk, 11; acquitted, 1; convicted, 10.

Fines collected, $47.90, besides the cost of prosecution.

TYPHOID FEVER.

There were 204 cases reported during the year, against 338 in 1900.

Ward.	Sanitary.	Nuisances Found.	Nuisances Abated.	Not Abated.
First	13	..	..	..
Second	3	2	2	..
Third	2	..	2	..
Fourth	8	3	3	..
Fifth	1	..	..	..
Sixth	4	3	2	1
Seventh	9	1	1	..
Eighth	4	3	3	..
Ninth	2	1	1	..
Tenth	6	2	2	..
Eleventh	4	7	5	1
Twelfth	8	7	5	2
Thirteenth	10	10	4	6
Fourteenth	5	10	8	2

Ward.	Sanitary.	Nuisances Found.	Nuisances Abated.	Not Abated.
Fifteenth	3	2	2	..
Sixteenth	9	5	4	1
Seventeenth	2	5	5	..
Eighteenth	9	6	6	..
Nineteenth	6	6	6	..
Twentieth	8	..	..	..
Twenty-first	3	1	..	1
Twenty-second	4	2	2	..
Twenty-third	4	1	1	..
Total	127	77	62	15

Of the 244 cases reported, 5 were from Trinity Hospital, 2 from Knowlton Hospital, 1 each from St. Mary's and St. Joseph's Hospitals.

Of the 15 cases of nuisances for which orders were disobeyed, 7 are wells, 2 vaults, 2 plumbing and 4 water closets.

PUBLIC SCHOOLS.

Two hundred and three school examinations were made, and the following defects referred to the School Board, since vacation in June last.

Sept. 21. East Side High—Reference No. 28. Leak in sewer, loose joint in soil pipe.

Dec. 4. Second District School, Tenth and Prairie—Reference No. 35. Gas leaking in northwest room, third floor.

Oct. 28. Fifth District Primary, Greenbush and Walker—Reference No. 32. Exhaust of engine too near class room.

Sept. 17. Seventh District, Jefferson street—Reference No. 27. Insufficient flush of boys' urinal.

Sept. 14. Thirteenth District, Primary, Lee and Weil—Reference No. 26. Wet ceiling in north class room, second story, from defective roof.

Nov. 16. Fifteenth District, Twenty-seventh and Cold Spring avenue—Reference No. 34. Ventilating too near ground direct from play ground enters class room.

Oct. 19. Seventeenth District, Trowbridge and Delaware—Reference No. 138. Engine room ceiling should be covered with fireproof paint and hood placed over crank shaft of engine.

Nov. 13. Twentieth District No. 3, Twelfth and Center—Reference No. 33. Outhouse over privy very defective.

Oct. 11. Twentieth District, Twenty-second and Center—Reference No. 29. Urinal in northwest corner of old building leaking badly.

Dec. 24. Seventeenth District School, Dover street—Reference No. 36. Urinal for boys offensive, not flushed, traps stopped up.

The defects in Second, Fifth, Fifteenth, Seventeenth and Twentieth District Schools are not remedied.

PAROCHIAL SCHOOLS.

Defects Since Vacation.

Oct. 18. St. Boniface, corner Eleventh and Clark—Report 141. Offensive urinal, spider webs. Verbal notice 141. O. K.

Nov. 9. St. Marcus, Garfield & Island avenue—Report 157. Wooden partition excludes light and air from girls' closet in basement. Verbal order 288.

Dec. 7. Trinity, Fourth and Lee—Report 185. Insufficient flush in boys' urinal in basement. Verbal order 304. O. K.

Dec. 13. St. John of Nepomuk, Fourth and Court street—Report 189. Boys' urinal in basement not clean. Verbal order 309.

All orders have been complied with except No. 288.

LIST OF BLANKS, CIRCULARS, ETC., USED IN HEALTH OFFICE.

No. of Form B. of P. W.	H. Dept.	
161.	1.	Report of contagious disease.
	2.	Report of recovery.
162.	3.	Certificate of recovery.
163.	4.	Assistant Physicians' order and report on contagious diseases.
164.	5.	Contagious disease notice (quarantine).
	6.	Affidavit of physician requesting release of quarantine.
165.	6A.	Weekly report of Registrar.
	7.	Notice to physicians regarding infectious diseases.
	7½.	Notice to physicians regarding diphtheria suspects.
	8.	Placarding ordinance amended.
	10.	Certificate of successful vaccination.
	10½.	Notice to school superintendent.
	11.	Physicians' clinical report.
	12.	Physicians' report of smallpox cases.
	13.	Certificate for household goods destroyed.
	14.	Receipts for provisions.
126.	15.	Undertakers' memorandum.
167.	16.	Certificate of death.
168.	16½.	Certificate of death, yellow, without stubs.
	17.	Undertakers' report.
	18.	Burial permit.
	19.	Transit permit.
	20.	Order to admit patient to hospital.
	20½.	Receipt for hospital supplies.
	21.	Report of hospital physician.
	22.	Patient's discharge from hospital.
	23.	Patient's death at hospital.
	24.	Circular pertaining to diphtheria (English).
	24½.	Circular pertaining to smallpox (English).
	25.	Circular pertaining to diphtheria (German).
	26.	Circular pertaining to scarlet fever (English).
	27.	Circular pertaining to scarlet fever (German).
	28.	Circular to undertakers regarding shipments (contagious).
	28½.	Circular to physicians regarding death and birth reports.
	29.	Circular to clergymen and undertakers regarding burials (contagious).
	30.	Monthly mortality and business report.
	31.	Weekly sanitary report.
169.	32.	Complaints (general).

No. of Form B. of P. W.	H. Dept.	
170.	33.	Complaints (special).
	33½.	Citizens' complaints.
	34.	Call notice.
	35.	Application to clean vaults.
	36.	Scavengers' permits.
	36½.	Notice of neglect to scavengers.
	37.	Privy vault regulations.
	37½.	Rules for scavengers.
171.	38.	Reinspections.
	39.	Order to clean vault.
	40.	Order to repair, etc., vaults, water closets, etc.
	40½.	Request for testing plumbing done.
172.	41.	Order to abate general nuisance, clean yards, etc.
	42.	Order to abate nuisance on private property (removal of dirt).
	43.	Order to make sewer.
	44.	Order to abate nuisance on public places, provide garbage and ash boxes.
	45.	Reinspection report, general nuisances.
173.	46.	Verbal notice to abate nuisance.
	47.	Notice to comply with order.
	47A.	Notice to bakers.
	48.	Rules pertaining to the collection of garbage.
	49.	Garbage inspector's daily reports.
	50.	Garbage boat inspector's report.
174.	51.	Meat inspector's report.
	51½.	Confiscation of meats.
	52.	Meat inspector's voucher to commission houses.
175.	53.	Cow stable reports.
176.	54.	Meat dealers' cards.
	55.	Milk dealers' license.
	56.	Milk dealers' applications.
	57.	Milkmen's application for license.
	58.	Certificate of gravity of milk.
	58½.	Ordinance regulating milk business.
	58¾.	State law (Ch. 313 of '99) providing for pure milk and cream.
	59A.	Ordinance regulating sale of fruit.
	59.	Circular to fruit dealers.
178.	60.	Rules of bakeries and candy manufacturers.
	61.	Notice to bakeries (State law of 1897, Chap. 375).
	61½.	Notice to bakeries (ordinance, 1897, Aug. 17, No. 131).
	62.	Analysis of water.
	62½.	Scavenger peppermint test orders and notice of having job inspected.

No. of Form B. of P. W.	H. Dept.	
	63.	Inspector's report on well.
	63½.	Chemist's report on well.
	64.	Inspector's report of immigrants.
	65.	Physician's certificate of immigrants' baggage.
	66.	Rules for dairymen.
	67.	Order to chief inspector (non-resident owners).
	68.	Certificate to Comptroller (non-resident owners).
	69.	Circular in relation to contagious diseases by State Board of Health.
	70.	Order in relation to nuisances caused by distilleries, rendering establishments in county and within 4 miles from city.
	71.	Order to fill well.
	71½.	Order to boil water.
	72.	Ordinance, fire escapes.
	73.	Order to provide manure box.
	74.	Circular (marriage certificate).
	75.	Reports on school house inspections.
	76.	Notice to quarantine glandered horse.
	77.	Certificate of birth.
	78.	Certificate of marriage.
	79.	Rules for management of children in hot season.
	80.	Order to abate nuisance on private property.
	81.	Rules for slaughter houses, meat markets, etc.
180.	82.	Typhoid fever reports.
	83.	Order to abate smoke nuisance.
	84.	Order to provide strainers for tanneries.
	85.	Law of 1887, Chap. 361, ice business.
	86.	Law of 1897, Chap. 273, ice business.
	87.	Circular, 50 dairy rules, English and German.
	88.	Circular, school hygiene.
	89.	Circular in relation to vaccination (English, German and Polish).
	90.	Circular, State Board of Health, membraneous croup.
	91.	Rules for Isolation Hospital.
	92.	Circular, Chap. 14, Sec. 200, general ordinances, 1888, to report contagious diseases of dead animals in 12 hours.
	93.	Ordinance to connect barn to sewer.
	93½.	Ordinance, Chap. 24, Sec. 3, water closet must have flush.
181.	94.	Ordinance 82 of 1898 to provide covered manure box.
	95.	Ordinance 6 of 1900, vault limits.
	96.	Circular to physicians concerning vital statistics.
	97.	Circular explaining quarantine.
	98.	Diagnosis culture of suspected diphtheria.
	98½.	Culture report, diphtheria.

HEALTH DEPARTMENT FUND.

1901.		
Jan. 28.	Blank books	$144 00
Feb. 1.	January pay rolls	2,609 51
	January pay rolls, garbage disposal	5,599 23
	Cleaning vault	10 00
11.	Groceries, meat, milk	88 64
	Rent of land, garbage disposal, January	400 00
	Supplies, etc.	205 28
	Rent of hospital, Dec. 15 to Jan. 15, 1901	125 00
25.	Advertising	1 60
	Lighting, gas, Nov. 30 to Dec. 29	6 00
	Coal	320 00
	Stationery	16 85
	Services of nurse	53 57
	Rent for land, garbage disposal	75 00
	Supplies, etc.	588 68
Mch. 1.	February pay rolls	2,609 57
	February pay rolls, garbage disposal	4,994 52
	Boarding men under quarantine	168 00
11.	Groceries and meat	39 30
	Rent of land, garbage disposal, February	400 00
	Printing	73 92
	Coal	21 00
	Services of nurses	26 45
	Rent of hospital, Jan. 15 to Feb. 15	125 00
	Telephone service, first quarter	64 63
	Supplies, etc.	213 26
25.	Groceries, meat, milk	84 14
	Printing	21 00
	Coal	76 00
	Supplies, etc.	180 03
April 1.	March pay roll	2,598 72
	March pay roll, garbage disposal	5,330 23
8.	Groceries	10 81
	Rent of land, garbage disposal, March	400 00
	Teaming, etc., garbage disposal, March	21 25
	Printing	33 33
	Supplies, etc.	128 91
15.	Bedding destroyed	35 55
	Groceries, meat and milk	125 10
	Coal	70 00
	Rent of hospital, Feb. 15 to March 15	250 00

April	22.	Printing	56 70
		Supplies, etc.	18 94
May	1.	April pay rolls	2,632 21
		April pay rolls, garbage disposal	5,332 11
	6.	Printing	11 50
		Lighting, gas, first quarter	39 68
		Supplies, etc.	132 99
		Supplies, etc., garbage disposal	18 10
	20.	Groceries, meat and milk	95 90
		Rent of land, garbage disposal, April	400 00
		Coal	70 00
		Rent of hospital, April 15 to May 15	125 00
		Postage stamps	168 40
		Supplies, etc.	452 24
	25.	Boarding persons in quarantine	139 00
		Bedding, etc., destroyed	31 00
		Transcript of testimony	15 15
June	1.	May pay rolls	2,618 06
		May pay rolls, garbage disposal	5,692 10
	3.	Supplies, garbage disposal	51 55
		Coal	13 00
		Printing	15 86
		Supplies, etc.	8 50
	17.	Printing	9 00
		Groceries, meat and milk	130 44
		Rent of land, garbage disposal, May	250 00
		Supplies, etc.	133 48
	24.	Goods destroyed	84 30
July	1.	Printing	47 97
		Postage stamps	21 20
		Groceries, butter and eggs	26 57
		Coal	32 50
		Telephone service, second quarter	62 50
		Supplies, etc.	134 39
		June pay rolls	2,640 55
		June pay rolls, garbage disposal	6,192 00
	15.	Groceries, meat and milk	74 07
		Rent of land, garbage disposal, June	250 00
		Service of nurses	128 67
		Postage stamps	4 00
		Supplies, etc.	66 31
	20.	Service of nurses	496 09
		Bedding, etc., destroyed	96 80
	29.	Supplies, garbage disposal	6 00
		Supplies, garbage disposal	19 50

July	29.	Lighting, gas, second quarter	25 12
Aug.	1.	July pay rolls	2,656 27
		July pay rolls, garbage disposal	7,014 22
	12.	Groceries, meat and milk	135 12
		Rent of land, garbage disposal, July	250 00
		Hauling ground, garbage disposal	36 52
		Services of nurses	16 77
		Rent of hospital, May 16 to July 15	250 00
		Printing	42 50
		Supplies, etc.	129 98
	26.	Postage stamps	10 00
		Groceries, butter and eggs	70 57
		Rent of hospital, July 15 to Aug. 15	125 00
		Supplies, etc.	61 16
Sept.	2.	August pay rolls	2,658 21
		August pay rolls, garbage disposal	7,080 35
	9.	Rent of land, garbage disposal, August	250 00
		Rent of hospital	125 00
		Printing	28 47
		Blank books	23 50
		Supplies, etc.	49 03
	23.	Groceries, meat and milk, etc	145 79
		Telephone service, third quarter	44 50
		Supplies, etc.	429 64
		Advertising	2 36
		Supplies, garbage disposal	24 10
	25.	August pay roll	28 75
		September pay roll	2,684 21
		September pay roll, garbage disposal	6,540 61
Oct.	7.	Postage stamps	40 20
		Rent of land, garbage disposal, September	250 00
		Rent of hospital	125 00
		Printing	70 50
		Supplies, etc.	83 13
	21.	Groceries, meat, milk, etc	131 96
		Lighting, gas, third quarter	21 04
		Postage stamps	21 20
		Rent of hospital	125 00
		Printing	172 16
		Supplies	46 58
		Supplies, garbage disposal	62 70
Nov.	1.	October pay roll	2,688 21
		October pay roll, garbage disposal	6,522 86
	4.	Printing	12 11
		Rent of land, garbage disposal, October	250 00

Nov.	4.	Services of nurses	26 67
		Binding	37 50
		Supplies, etc.	9 62
Dec.	2.	Services of nurses	74 00
		Groceries, meat and milk	112 78
		Telephone service, fourth quarter	62 50
		Rent of hospital	125 00
		Postage stamps	4 00
		Supplies, etc.	81 63
	3.	November pay roll	2,643 21
		November pay roll, garbage disposal	5,548 46
	16.	Groceries, meat, etc	73 41
		Rent of land, garbage disposal, November	250 00
		Blank books	144 00
		Supplies, etc.	194 46
	17.	Goods destroyed	16 00
		December pay roll	1,667 40
		December pay roll, garbage disposal	3,338 36
	30.	Coal	227 13
		Groceries, milk, butter, etc	29 61
		Rent of hospital	125 00
		Supplies, etc.	124 26
		Supplies, etc., garbage disposal	3 63
1902.			
Jan.	2.	December pay roll	1,016 27
		December pay roll, garbage disposal	1,029 32
	13.	Printing	37 72
		Blank books and stationery	41 00
		Groceries, meat	90 42
		Rent of land, garbage disposal, December	300 00
		Lighting, gas, fourth quarter	39 76
		Postage stamps	14 00
		Supplies, etc.	138 18
			$116,574 19

RECAPITULATION.

Pay rolls	$31,751 15
Pay rolls, garbage disposal	70,214 37
Supplies, etc., garbage disposal	202 60
Rent of land, garbage disposal	3,725 00
Supplies, etc.	4,257 21
Groceries, meat, milk, butter and eggs	1,454 73
Services of nurses	822 22
Coal	829 63

Rent of hospital, No. 102 Seventh street	1,625 00
Printing	632 74
Stationery	406 85
Advertising	3 96
Lighting, gas	131 60
Telephone service	234 13
Postage stamps	283 00
	$116,574 19
Cost of garbage disposal	74,141 97

Respectfully submitted,

FRANK B. SCHUTZ,

Secretary.

F. M. Schulz, M. D., Commissioner of Health:

SIR—The following is a statement of the work done in the collection and disposal of garbage and in the collection of dead animals for the year 1901.

There were 30,359 tons of garbage, and 135 tons of dead animals, making a total of 30,494 tons.

MONTH.	NUMBER OF TEAMS.		NUMBER OF LOADS.		DEAD ANIMALS.		Number of Laborers and Helpers.
	Single.	Double.	Single.	Double.	Large.	Small.	
January	58	18	2,421	383	12	291	34
February	58	18	2,040	349	16	290	34
March	58	18	2,211	366½	19	724	32
April	60	17	2,223	349	14	601	33
May	59	18	2,329	340½	15	589	32
June	61	18	2,712	355	11	509	40
July	60	17	3,224	407⅓	18	512	31
August	62	17	3,277	408	22	555	32
September	62	17	3,052	359	25	463	33
October	63	16	2,773	353	22	790	30
November	62	16	2,452	292	20	440	31
December	62	16	1,800	239	16	356	30
			30,714	4,201⅓	208	6,123	

Single loads, 1,250 lbs.
Double loads, 5,000 lbs.

Respectfully submitted,

JAS. GRAHAM,

Supt. Collection and Disposal of Garbage.

ANNUAL REPORT

OF THE

Commissioner of Health

OF

MILWAUKEE.

(TWENTY-SIXTH ANNUAL REPORT OF THE DEPARTMENT.)

APRIL, 1903.

MILWAUKEE:
THE EDW. KEOGH PRESS, 347-349 BROADWAY.
1903.

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1903.

OFFICERS AND EMPLOYES

OF THE

Health Department of the City of Milwaukee

FOR THE

YEAR ENDING APRIL 13th, 1903.

Commissioner of Health,

F. M. SCHULZ, Ph. G. M. D.

Medical Assistants to Commissioner of Health,

Arthur J. Patek, M. D., Louis F. Jermain, M. D.,

Gilbert E. Seaman, M. D.,

Charles J. Coffey, M. D., James H. Hackett, M. D.

Food Analyst,

Otho Fiedler, M. D.

Registrar of Vital Statistics,

W. C. Bennett, M. D.

Secretary,

Frank B. Schutz.

Clerk,

E. W. Diercks.

Registration Clerk,

Miss Belle Reese.

Confidential Secretary,

Miss Helen Wilson.

Stenographer,

Miss N. H. Taylor.

OFFICERS AND EMPLOYES—Continued.

Sanitary Police.

T. H. Curtis, Chief Sanitary Inspector.

David Thomas, Chief of Disinfecting Corps.

G. E. Adams, Chief Garbage Inspector.

F. J. Carney, Meat Inspector.

F. Falbe, Meat Inspector.

Phil. Stock, Meat Inspector.

Ed. McGrath, Meat Inspector.

H. Keihl,

J. O. Osmunson,

J. F. Cunningham,

E. Seaman,

W. Fremont,

C. J. Kruckenberg,

Jacob H. Schultz,

P. J. King,

J. Campbell,

J. M. Calligan,

O. E. Klein,

T. Boutin,

John Dolge.

Matron to City Isolation Hospital for Contagious Diseases,

Miss J. C. Wehrman.

Cook to City Isolation Hospital,

Sarah Haisler.

Janitor to City Isolation Hospital,

Mike Haisler.

COMMITTEE ON HEALTH

OF THE

BOARD OF ALDERMEN.

Fred. C. Bogk,

F. J. Stiglbauer,

John McCoy,

Geo. Himmelstein,

Chas. J. Fitzgerald,

Thos. E. Hayes,

Louis Jenz,

A. J. Langholff,

H. J. Schilling.

REPORT.

To the Honorable the Mayor and Common Council of the City of Milwaukee:

GENTLEMEN—I have the honor to transmit herewith the report of the Health Department for the year ending April 13th, 1903, being the twenty-sixth annual report of this Department.

The total number of births reported for registration during the year 1902 was 7,406, as against 7,415 for 1901. Of this number 3,708 were males and 3,698 females; 7,398 white and 8 colored. Physicians reported 2,987 and midwives 4,419. The banner ward of the city was the Fourteenth, with a total of 943 births to its credit, whereas the births in the Seventh ward numbered only 54.

The total number of deaths reported during the year 1902 was 3,796, showing an annual death rate per 1,000 of 12.65 on an estimated population of 300.000. For the year 1901 the number of deaths was 3,833, representing an annual death rate of 12.99.

Within the last ten years the mortality rate of the city has been lowered from 20.25 in 1892 to 12.65 per 1,000 in 1902.

The reasons for this healthful condition of our city are manifold Its favorable location on a high plateau next to a large body of water, a perfect sewerage system, clean and well paved streets and alleys, an absence of cheap class tenement houses, a good water supply, careful supervision of the milk supply, strict enforcement of all sanitary regulations, close observation of all cases of contagious diseases with isolation of patients and subsequent disinfection of premises, distribution of educational literature on sanitation, etc. All these factors have been the means of reducing the mortality of the city to its present low rate.

The number of deaths from contagious diseases during the past year has also slightly decreased, being 194, as against 230 for 1901.

DIPHTHERIA.

During the year there were 455 cases of diphtheria reported, with 83 deaths, a percentage of 18.2, as against 483 cases with 100 deaths, a percentage of 20.7, for the year 1901.

I am fully convinced that had antitoxine been used in all these cases sufficiently early the mortuary rate would have been materially reduced. With our present system of furnishing antitoxine free of charge to all the poor of the city, there is no longer any excuse for bad results in diphtheria cases. Administered early and in sufficient quantities, antitoxine should reduce the mortality rate of diphtheria to less than half of the present rate.

SCARLET FEVER.

Scarlet fever still continues to appear in a mild form. The number of cases reported during the year being 230 with 10 deaths, as against 372 for 1901 and 1,726 cases for 1900.

This decided drop in the number of cases during the last two years is undoubtedly due to the establishment of a thirty day quarantine rule by this Department some two years ago.

SMALLPOX.

During the past year 261 cases of smallpox, with 1 death, were reported to this office. This is the largest number of cases for any year since the great epidemic of 1894. The mild character in which the disease manifested itself made it extremely difficult for this Department to successfully cope with it. In most instances the cases were not reported by physicians, as the afflicted were not sufficiently ill to require their services, and it was only through information

received from neighbors or through the untiring efforts of the sanitary inspectors connected with this Department, who were making a house to house canvass through the infected districts, that the Department discovered existing cases. That the disease did not become epidemic is almost marvelous; however, this was largely due to the drastic measures adopted by the Department to stamp out the scourge. All the cases, with the exception of two, were removed to the Isolation hospital, the premises thoroughly fumigated and all persons who had come in contact with the patient vaccinated, or, upon refusing to be vaccinated, quarantined for two weeks. All school buildings in the vicinity of the infected districts were fumigated and the school children vaccinated. Physicians connected with the Department were also sent into these districts and requested to vaccinate all persons who would submit to it. In this way the Department has been successful in holding the disease in check and within a short time expect to entirely get rid of it, with the exception probably of cases that may hereafter be brought to the city from the surrounding country.

The events of the past year have again demonstrated the absolute necessity of every large city to be in possession of a modern and well equipped Isolation hospital where persons suffering from contagious diseases can be accommodated and cared for, thereby preventing the spread of these diseases in the community. I regret exceedingly that Milwaukee in this respect is not keeping pace with other cities of its class, and that patients which the Health Department is called upon to care for are not placed in a hospital such as should be possessed by the city.

A bill has been introduced during the present session of the State Legislature conferring the right upon the City of Milwaukee to acquire lands outside its corporate limits to be used for hospital purposes. Should this bill become a law, which I sincerely hope it will, I would urgently request your honorable body that immediate steps be taken

to purchase a tract of land sufficiently large to accommodate a number of cottages for the proper treatment of all cases of contagious diseases that this city may have to contend with.

TUBERCULOSIS.

So widespread is the interest in the subject of tuberculosis that I may be excused for again calling your attention to the practical side of the disease as it appeals to us as sanitarians. There are various phrases that should, for completeness sake, be briefly taken into consideration, but I shall devote myself almost entirely to the question of sanitaria for the tuberculous.

First a word in the matter of the sputum, which—as is universally recognized—is practically the sole source of the contagion.

The anti-spitting crusade, begun so many years ago, had for its object not only the abrogation of a dirty habit, but more particularly checking the spread of the disease tuberculosis. We trust that this crusade will soon have enough sponsors to effect a control of this vicious and injurious habit. According to S. A. Knopf, in an excellent article on "The Present Aspect of the Tuberculosis Problem in the United States," two states have general anti-spitting laws, five states have local, and thirteen cities individual anti-spitting laws.

The curability of tuberculosis when in the incipient stage is so well established, that I will adduce no statistics to give strength to this assertion. Suffice it to say that those who make a study of this disease take a very hopeful view of its course, making but one factor essential —that the disease be taken in hand early. With the curability of tuberculosis, open air or sanitarium treatment are intimately linked, as they ought in reality to be considered under one heading. I take Knopf as authority for the following statistical reports; the United States goverment has two sanitaria for the tuberculous, five states have five special state sanitaria, nine states have projected sanitaria

(this includes Wisconsin); only three cities (New York, Chicago, Buffalo) have special municipal consumptive hospitals.

The question of tuberculosis in prisons is a matter of such tremendous concern that I would invite your attention to this subject but a moment. Let me quote a sentence from Knopf:

"The State of Texas distinguishes itself by an admirable enterprise. It has an agricultural colony for tuberculous prisoners. The result has been suprising. A large number of prisoners have been cured, and during the first year $25,000 remained as net earnings of this philanthropic enterprise. There is no other state or private institution taking care of consumptives in the large State of Texas, the tuberculous prisoners alone are well provided for. This should give us such food for thought as to what to do with our consumptive poor in the earlier states of the disease who are not criminals. A similar situation exists in Minnesota, where there is a special hospital for tuberculous prisoners."

There is much food for thought in this, gentlemen.

There seems to be a general impression that very high altitudes are of necessity required for the treatment of the disease. This is an erroneous impression, for—while a pure rarified atmosphere may be desirable, the essential feature of the open air treatment is an abundance of fresh air—no matter where obtained. The good results obtained in Dr. Trudeau's sanitarium in northern New York state—with an altitude above sea level of less than one-third that of Colorado—are as gratifying as are those obtained in the latter region. There is no reason why any state having forest preserves--can not offer a site for the sanitarium treatment of tuberculosis, and there is every reason why cities should be empowered to erect outside of their corporate limits and in any favorable localities in their state—institutions for the indigent tuberculous.

Though the bill introduced into the State Legislature providing for an appropriation of $100,000 for a state sanitarium was lost, the matter

has been kept alive by the appointment of a committee of five, instructed to investigate and report upon the tuberculosis problem in the state. If this report be favorable—and we hardly think it can be otherwise—the consummation of our desires may be the outcome.

We have but to see what other states are doing, and have done, to feel encouraged that ultimately these results that mean so much to us, will be met in our own state. Societies for the prevention of tuberculosis have been organized, and they have enlisted the interest of humanitarians in their plans for the betterment of mankind. The problem is being taken up and studied, and soon these combined efforts of scientist and layman will have their reward in the gratitude of those who, without their aid, would be doomed to fill an early grave.

Our records during the past year show a mortality of 395 from tuberculosis of all forms, as compared with 473 the previous year. Circulars of instruction to the afflicted and their attendants have been distributed, and it is gratifying to note that there were numerous requests for the disinfection of rooms occupied by consumptives. We welcome these requests, for—coming from lay-people—they demonstrate that there is being awakened in the minds of the public an appreciation of the true contagious nature of tuberculosis, and each case, thus intelligently cared for, may mean the saving of a life, the preservation of a home? These are stern realities, and they deserve and ought to have your earnest consideration.

TYPHOID FEVER.

Attention has been called in previous reports to the association of typhoid fever with impure water and milk, and unclean vegetables. Acting upon this information, the Health Department has been keeping a close scrutiny of the milk and water supply. So far as possible all milk under standard was destroyed; many wells were ordered closed and over 600 privy vaults were ordered cleaned and filled. The addi-

tional precaution was taken of forbidding truck farmers from receiving night soil. All these measures doubtless contributed to the low typhoid morbidity and mortality, no epidemic of any severity having occurred during the year.

There were reported 208 cases of typhoid fever, with 48 deaths. As has been previously pointed out, it would be an obvious fallacy to argue from these figures that the death rate from this disease was 23 per cent. In last year's report we explained that "such a statistical record is of relatively little value, for it merely proves that many more cases of typhoid raged in the city, and that either the cases were not properly reported or that they had no medical treatment, or were unrecognized by the attendants." Granting that the mortality may have reached 10 per cent., it would mean that there had been about 480 cases. These figures show a decided reduction in the cases as compared with the previous years.

A tabulated statement makes this more apparent:

	1900.	1901.	1902.
No. of cases reported	340	205	208
No. of deaths reported	59	63	48
Mortality	17.4%	30%	23%
Estimated No. of cases that actually existed on a basis of 10% mortality	590	630	480

Respectfully submitted,

F. M. SCHULZ, M. D.,

Commissioner of Health.

REPORT

OF

REGISTRAR.

BUREAU OF VITAL STATISTICS.

F. M. Schulz, M. D., Commissioner of Health:

SIR—I herewith submit the twenty-sixth annual report of the vital statistics of the City of Milwaukee for the year ending December 31st, 1902.

DEATHS.

During the year 3,796 deaths occurred within the city limits, 37 less than in 1901, which represents the lowest rate, 12.65 per thousand, that we have recorded for any year except 1898.

The following table shows the number of deaths for each year since 1869, the date at which our records commenced, and the population, estimated as accurately as possible with the corresponding death rate:

Year.	Population.	Total Deaths.	Rate per 1,000.
1870	71,440	1,495	20.93
1871	75,000	1,452	19.36
1872	79,500	2,022	25.43
1873	83,000	1,878	22.62
1874	87,000	1,939	22.29
1875	91,500	1,506	16.46
1876	95,000	2,128	22.40
1877	100,000	2,198	21.98
1878	105,000	1,584	15.09
1879	110,000	1,978	17.98
1880	115,587	2,390	20.68
1881	122,000	2,697	22.10
1882	130,000	2,729	20.99
1883	138,000	2,532	18.35
1884	147,000	2,768	18.83
1885	156,000	2,796	17.92
1886	165,000	2,021	18.31
1887	175,000	3,257	18.61
1888	185,000	2,426	18.52
1889	195,000	3,188	16.35
1890	204,468	3,747	18.33
1891	214,000	4,689	21.91

Year.	Population	Total Deaths.	Rate per 1,000.
1892	223,000	4,516	20.25
1893	232,000	4,462	19.23
1894	241,000	4,253	17.64
1895	250,000	3,885	15.54
1896	260,000	3,904	15.00
1897	275,000	3,606	13.11
1898	280,000	3,338	11.92
1899	285,000	3,843	13.48
1900	290,000	4,026	13.88
1901	295,000	3,833	12.99
1902	300,000	3,797	12.65

From this table it will be seen that the death rate is getting constantly less, and particularly during the last decade, during which the rate had steadily decreased from 21.91 per thousand in 1890, to 12.65 in 1902, and this, notwithstanding the increased population with its concomitant crowding and other insanitary conditions which necessarily accompany the growth of large cities.

There were 1,353 deaths under 5 years, as against 1,330 in 1901, a slight increase both in the actual number of deaths and in the rate which was 34.90 in 1901, and 35.64 in 1902.

By referring to the following table the steady reduction in deaths under 1 year and from 1 to 5 since 1893, will be seen, a condition which is certainly gratifying.

Years.	Total Deaths.	Under One Year.	One to Five Years.	Total Under Five Years.	Per Cent. Under Five to Total Deaths.
1892	4,516	1,479	744	2,223	49.2
1893	4,462	1,653	664	2,317	51.9
1894	4,253	1,441	650	2,091	49.2
1895	3,885	1,339	486	1,825	46.9
1896	3,904	1,297	494	1,791	45.9
1897	3,606	1,077	425	1,502	41.6
1898	3,338	1,010	336	1,346	40.3
1899	3,843	1,113	428	1,541	40.1
1900	4,026	1,247	484	1,731	43.0
1901	3,833	1,001	329	1,330	34.7
1902	3,796	963	390	1,353	35.6
	43,462	13,620	5,430	19,050	43.9

The number of deaths under 1 year was 38 less than in the preceding year. Deaths from diarrhoeal diseases under 1 year and convulsions

were less in 1902 than in 1901, but measles, whooping cough and acute lung diseases were considerably increased.

The Fourteenth ward had the highest death rate, followed by the Thirteenth, Fifth, Ninth and Eleventh in the order named, each having a rate of over 12.00 per thousand. The Fifteenth ward had the lowest rate, followed by the Twentieth, Seventh, Fourth, Sixteenth and Twenty-second, in the order named, each having a rate of less than 10.00 per thousand.

There were 2,085 males and 1,711 females, being in the proportion of 54.66 per cent. males and 45.34 per cent. females.

The average age of the 3,796 decedents was 31 years 9 months and 7.7 days.

A table showing the number of deaths from the more important causes, for the past nine years, follows:

CAUSES OF DEATH.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
Typhoid Fever	70	63	46	31	46	47	59	63	48
Measles	69	1	29	36	2	26	36	17	36
Scarlet fever	12	5	4	3	2	36	70	16	10
Whooping cough	69	60	15	19	53	9	46	21	49
Diphtheria	237	179	198	106	61	109	124	100	85
Pulmonary tuberculosis	354	288	335	346	316	372	373	400	320
Cancer	107	139	158	164	166	194	196	206	208
Meningitis	107	82	96	70	108	123	72	93	93
Apoplexy	90	90	108	92	107	120	139	160	144
Convulsions	250	239	246	191	127	144	140	124	94
Organic heart disease	143	161	185	212	190	228	227	197	254
Bronchitis	169	181	189	193	182	173	180	176	230
Pneumonia	245	271	237	239	227	281	299	272	280
Diarrhoeal diseases	348	323	298	244	350	400	439	322	340
Nephritis	77	95	106	110	106	132	121	132	156
Congenial debility	415	364	374	217	194	244	323	290	234
Senile debility	124	116	108	123	84	69	78	115	92
Suicides	46	48	58	62	62	49	59	59	69
Accidents	119	145	143	125	116	155	152	166	188

From this table it appears that some diseases show a gratifying decrease, notably diphtheria, convulsions, meningitis, diarrhoeal diseases and congenital debility, on the other hand cancer, organic heart disease and nephritis show a small but regular increase.

To understand more fully the changes which are taking place in the mortality from the principal diseases, reference may be made to the subjoined charts, which show in graphic form the total deaths from the various diseases represented, the percentage of deaths to total deaths and percentage of deaths to population for 22 years, being from 1881 to 1902 inclusive.

Of the contagious diseases, measles and whooping cough do not show any change for better or for worse. There are years in which the number of deaths is very low and others in which it rises much above the average, but it can not be said that there is any improvement in the conditions which produce deaths from these diseases.

Scarlet fever and diphtheria show very great reductions in mortality, and this is particularly true of diphtheria since the introduction of antitoxine. Typhoid fever also shows much improvement.

The general course of the pneumonia and bronchitis curves is upward, while consumption, though producing a larger proportion of the total deaths, shows a great decrease in proportion to the population. Diarrhoea and convulsions show the most marked decrease, and it is certain that this decrease is largely due to the regular, careful inspection of milk which has been conducted by this Department.

BIRTHS.

There were 7,406 births with a rate of 24.69, as against 7,415 births in 1901 with a rate of 25.14. Of the total births 3,708 were male and 3,698 female.

The greatest number from any ward was 943 from the Fourteenth, and the least 54 from the Seventh. The former representing a rate of 43.94 and the latter of 7.29.

MARRIAGES.

There were 2,616 marriages reported, as against 2,460 for the preceeding year. Of the whole number of contracting parties, 5,232, only 13 were colored.

CONTAGIOUS DISEASES.

The following tables show the cases of and deaths from the principal contagious diseases by months and wards.

Tables are also included which show the comparative mortality from the principal zymotic diseases, acute lung diseases, consumption, diarrhoeal diseases, apoplexy and convulsions for the past twenty-two years, and the percentage of those deaths to the total deaths and to the entire population.

Respectfully submitted,

W. C. BENNETT, M. D.,
Registrar of Vital Statistics.

STATISTICAL TABLES.

TABLE A.

Showing by Months and Wards the Number of Cases of and Deaths from Typhoid for the Year 1902.

WARDS.	JAN.		FEB.		MAR.		APRIL.		MAY.		JUNE.		JULY.		AUG.		SEPT.		OCT.		NOV.		DEC.		TOTAL	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Case	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
First	....	....	....	....	.	1	1	....	....	....	....	....	....	....	1	....	1	....	1	1	....	....	1	....	5	2
Second	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	1	....	2	....	1	....	....	....	5	...
Third	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	1	1
Fourth	....	....	....	....	....	....	....	....	....	....	....	....	2	....	1	2	....	1	2	....	1	....	1	....	7	3
Fifth	1	....	9	....	....	....	....	....	....	....	....	....	1	1	2	....	2	....	3	....	....	....	....	....	18	1
Sixth	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	2	....	6	....	....	....	....	....	9	...
Seventh	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	1	...
Eighth	2	....	2	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	1	5	1
Ninth	3	....	....	1	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	3	1	1	....	9	2
Tenth	....	....	....	....	1	....	....	....	....	....	....	....	....	....	1	....	1	1	2	....	3	....	....	....	8	1
Eleventh	9	2	....	....	....	....	1	....	....	....	1	....	....	....	3	....	....	....	....	....	1	2	1	2	16	6
Twelfth	....	....	....	....	1	1	....	....	....	....	2	1	....	....	2	....	1	....	....	....	....	....	....	....	6	2
Thirteenth	1	....	....	....	1	....	....	....	....	....	....	....	7	....	5	....	5	....	....	....	1	....	1	1	21	1

TABLE A—Continued.

Showing by Months and Wards the Number of Cases of and Deaths from Typhoid for the Year 1902.

WARDS.	JAN.		FEB.		MAR.		APRIL.		MAY.		JUNE.		JULY.		AUG.		SEPT.		OCT.		NOV.		DEC.		TOTAL	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Fourteenth	....	....	....	....	1	....	2	....	....	....	3	....	1	....	1	1	5	....	....	1	3	....	....	....	16	2
Fifteenth	....	....	....	....	....	2	1	....	....	....	1	....	....	....	1	....	....	....	2	1	....	....	....	....	5	3
Sixteenth	2	....	....	....	....	....	....	....	....	....	....	....	1	....	1	....	1	....	....	....	....	....	....	....	5	...
Seventeenth	....	....	2	1	....	....	1	....	....	....	....	....	....	....	1	1	3	....	....	1	2	....	....	1	9	4
Eighteenth	....	....	....	1	....	....	1	....	1	....	....	....	3	1	2	2	6	1	3	2	2	1	2	....	20	8
Nineteenth	....	1	....	....	....	....	....	....	....	....	....	....	....	....	1	1	2	....	....	1	2	....	1	....	6	3
Twentieth	....	....	....	....	....	....	2	1	....	....	....	....	....	....	3	1	1	1	2	....	3	2	1	....	12	5
Twenty-first	....	....	1	....	....	....	....	....	....	....	....	....	2	1	3	....	2	....	....	1	3	....	....	....	11	2
Twenty-second	2	....	....	....	....	....	....	....	1	....	....	....	1	....	1	....	....	....	3	....	1	....	....	....	9	...
Twenty-third	....	....	....	....	....	....	....	....	....	....	....	....	4	....	....	....	....	....	1	....	1	1	1	....	7	1
Total	20	3	14	3	5	4	12	1	2	0	7	1	23	3	30	8	34	5	27	8	27	7	10	5	211	48

TABLE B.

Showing by Months and Wards the Number of Cases of and Deaths from Diphtheria for the Year 1902.

WARDS.	JAN.		FEB.		MAR.		APRIL.		MAY.		JUNE.		JULY.		AUG.		SEPT.		OCT.		NOV.		DEC.		TOTAL	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
First	....	....	1	....	....	....	1	1	3	....	....	....	2	....	....	....	....	....	1	....	....	....	....	....	8	...
Second	1	....	1	....	1	....	1	....	1	....	1	....	....	....	1	....	1	....	....	....	....	....	1	....	9	1
Third	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1	....	....	....	2	...
Fourth	2	....	....	....	....	....	4	....	12	2	1	....	7	1	....	....	....	....	2	....	2	1	....	....	30	4
Fifth	1	1	1	1	....	....	1	....	....	....	3	....	....	....	3	....	2	....	5	1	3	....	5	2	24	5
Sixth	1	....	4	....	3	....	....	....	....	....	1	....	1	1	5	....	....	....	2	....	1	....	....	1	18	2
Seventh	....	....	1	....	1	....	2	....	2	....	2	....	....	....	....	....	....	....	1	....	1	....	....	2	10	2
Eighth	4	1	....	....	....	....	3	....	1	....	1	....	1	....	3	....	2	....	5	....	....	....	....	1	20	2
Ninth	5	1	3	....	3	....	2	....	4	....	1	....	1	1	....	....	....	....	3	....	3	....	1	....	26	2
Tenth	....	....	1	....	1	....	6	3	....	....	....	....	1	....	4	1	....	....	3	....	2	1	....	3	18	8
Eleventh	3	....	4	1	5	....	1	3	1	1	3	....	4	....	2	2	2	1	1	....	6	1	8	1	40	10
Twelfth	1	....	....	....	....	1	1	....	....	....	....	1	....	....	....	....	2	....	2	....	1	....	2	1	9	3
Thirteenth	5	1	4	....	4	3	2	1	4	1	3	....	3	....	5	....	3	1	3	1	7	2	9	....	52	10

TABLE B—Continued.

Showing by Months and Wards the Number of Cases of and Deaths from Diphtheria for the Year 1902.

WARDS.	JAN.		FEB.		MAR.		APRIL.		MAY.		JUNE.		JULY.		AUG.		SEPT.		OCT.		NOV.		DEC.		TOTAL	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Fourteenth	1	....	1	1	....	1	5	3	1	....	2	....	1	....	....	....	1	....	....	....	....	....	4	....	16	5
Fifteenth	1	....	....	....	1	....	1	....	....	....	3	....	3	1	....	....	1	....	2	....	1	....	7	....	20	1
Sixteenth	1	....	2	....	1	....	2	....	1	....	2	....	2	....	1	....	3	1	2	....	3	1	4	....	24	2
Seventeenth	4	....	....	....	....	....	....	....	1	1	1	1	1	....	....	....	3	....	2	....	....	....	1	....	13	2
Eighteenth	2	....	....	....	....	....	....	....	2	....	1	....	....	....	....	....	1	....	1	....	7	4	3	....	17	4
Nineteenth	1	....	....	....	....	....	....	....	1	....	1	....	2	....	....	....	2	1	4	1	2	....	....	....	13	2
Twentieth	2	....	2	....	....	....	1	....	....	....	4	....	1	....	2	....	2	1	3	....	2	....	2	2	21	3
Twenty-first	3	....	2	....	....	....	5	3	4	....	3	2	1	....	2	....	3	1	5	2	3	....	7	....	38	8
Twenty-second	1	....	2	1	1	....	2	2	....	....	3	....	3	....	....	....	....	....	1	....	3	3	4	....	20	6
Twenty-third	....	....	1	....	3	....	1	1	....	....	1	1	....	....	....	....	....	....	3	1	5	....	1	....	15	3
Total	39	4	30	4	24	5	41	17	38	5	37	5	34	4	28	3	28	6	52	6	53	13	59	13	463	85

TABLE C.

Showing by Months and Wards the Number of Cases of and Deaths from Scarlet Fever for the Year 1902.

WARDS.	JAN.		FEB.		MAR.		APRIL		MAY.		JUNE.		JULY.		AUG.		SEPT.		OCT.		NOV.		DEC.		TOTAL	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
First	....	....	1	1	3	....	1	....	....	....	1	....	....	....	1	....	....	....	1	....	2	....	....	....	10	1
Second	....	....	....	....	....	....	3	....	1	1	1	....	....	....	....	....	....	....	....	....	....	....	1	....	6	1
Third	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1	....	....	....	....	....	....	....	2	...
Fourth	....	....	2	....	3	....	1	....	....	....	1	1	2	....	....	....	....	....	1	....	....	....	....	....	10	1
Fifth	2	....	1	....	2	....	1	....	....	....	1	....	1	....	....	....	1	....	....	....	1	....	....	....	10	...
Sixth	....	....	....	....	....	....	....	....	4	1	4	....	1	....	....	....	....	....	....	....	....	....	1	....	10	1
Seventh	....	....	....	....	....	....	5	....	1	....	1	....	....	....	....	....	....	....	1	....	1	....	....	....	9	...
Eighth	....	....	2	....	1	....	1	....	1	....	3	....	3	....	....	....	1	....	....	....	....	....	1	....	13	...
Ninth	....	....	1	....	....	....	....	....	1	....	1	....	....	....	....	....	....	....	3	....	1	....	1	....	8	...
Tenth	3	....	....	....	....	....	....	....	....	....	5	....	1	....	1	....	1	....	1	....	1	1	2	....	15	1
Eleventh	1	....	....	....	....	....	1	....	3	1	1	....	....	....	....	....	....	....	....	....	....	....	2	....	8	1
Twelfth	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1	....	1	....	1	....	....	....	4	...
Thirteenth	1	....	2	....	3	....	1	....	....	....	....	....	....	....	3	1	....	....	1	....	1	....	1	....	13	1

TABLE C—Continued.

Showing by Months and Wards the Number of Cases of and Deaths from Scarlet Fever for the Year 1902.

WARDS.	JAN.		FEB.		MAR.		APR.		MAY.		JUNE.		JULY.		AUG.		SEPT.		OCT.		NOV.		DEC.		TOTAL	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Fourteenth	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
Fifteenth	1	....	2	....	....	....	....	....	....	....	4	....	2	....	1	....	1	....	....	....	....	....	3	1	14	1
Sixteenth	9	....	5	....	5	....	....	....	1	....	2	....	1	....	2	....	1	....	1	....	....	....	....	....	27	..
Seventeenth	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	2	....	4	...
Eighteenth	5	....	2	....	3	....	....	....	1	....	1	....	3	....	....	....	....	....	1	....	1	....	2	....	19	...
Nineteenth	8	....	2	....	1	....	....	....	....	....	....	....	1	....	....	....	....	....	1	....	2	....	....	....	15	...
Twentieth	2	....	....	....	1	....	1	1	....	....	....	....	2	....	2	....	....	....	....	....	....	....	1	....	9	1
Twenty-first	....	....	....	....	3	....	2	1	2	....	....	....	....	....	1	....	1	....	....	....	1	....	1	....	11	1
Twenty-second	....	....	1	....	....	....	1	....	....	....	1	....	3	....	....	....	....	....	....	....	4	....	2	....	12	...
Twenty-third	1	....	1	....	1	....	....	....	1	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	5	...
Total	33	....	22	1	27	....	18	2	16	3	27	1	20	....	14	1	9	....	12	....	16	1	20	1	234	10

TABLE D.

Showing by Months and Wards the number of Cases of and Deaths from Measles for the Year 1902.

WARDS.	JAN.		FEB.		MAR.		APRIL.		MAY.		JUNE.		JULY.		AUG.		SEPT.		OCT.		NOV.		DEC.		TOTAL	
	Cases.	Deaths	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
First	....	....	2	....	4	....	4	....	4	....	15	1	....	....	....	....	....	....	1	....	1	....	....	....	31	1
Second	2	....	3	....	4	....	1	....	3	....	4	....	....	....	....	....	....	....	....	....	....	....	....	....	17	...
Third	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	...
Fourth	2	....	2	....	6	....	....	....	1	....	1	....	....	....	....	....	....	....	....	....	....	1	....	....	12	1
Fifth	1	1	....	....	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	3	1
Sixth	....	....	....	....	1	....	8	....	4	....	7	....	....	....	....	....	....	....	....	....	....	....	....	....	20	...
Seventh	2	....	....	....	....	1	....	....	....	....	1	....	1	....	....	....	....	....	....	....	....	....	....	....	4	1
Eighth	1	....	1	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	4	1
Ninth	2	....	....	1	2	....	2	....	6	1	5	1	2	....	1	....	....	....	....	....	1	....	....	....	21	3
Tenth	....	....	....	....	2	1	5	....	5	....	7	....	....	....	....	....	....	....	....	....	....	....	....	....	19	1
Eleventh	....	....	....	....	....	....	4	....	7	....	11	2	2	1	....	....	....	....	....	....	1	....	....	....	25	3
Twelfth	4	....	....	1	....	....	....	....	3	....	1	....	....	....	....	....	....	....	1	....	....	....	....	....	9	1
Thirteenth	....	....	1	....	9	....	3	....	4	3	5	3	....	....	....	....	....	....	....	....	....	....	....	....	22	6

TABLE D—Continued.

Showing by Months and Wards the number of Cases of and Deaths from Measles for the Year 1902.

WARDS.	JAN.		FEB.		MAR.		APRIL.		MAY.		JUNE.		JULY.		AUG.		SEPT.		OCT.		NOV.		DEC.		TOTAL	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Fourteenth	....	....	....	....	....	....	....	....	....	....	3	....	1	2	2	....	....	....	....	....	5	1	....	....	11	3
Fifteenth	1	1	8	....	11	....	10	....	9	....	5	....	....	....	....	....	....	....	....	....	....	....	....	....	44	1
Sixteenth	....	....	2	....	2	....	5	....	2	....	7	....	1	....	....	....	....	....	....	....	1	....	....	....	20	...
Seventeenth	....	....	....	....	....	....	....	....	3	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....	6	...
Eighteenth	2	....	....	....	6	....	10	1	14	1	13	2	....	....	1	....	....	....	....	....	....	....	....	....	46	4
Nineteenth	....	....	8	....	14	....	6	....	1	....	5	....	2	....	....	....	....	....	....	....	....	....	....	....	36	...
Twentieth	1	....	3	....	6	1	10	....	9	....	5	....	11	....	....	....	....	....	....	....	....	....	....	....	45	1
Twenty-first	1	....	....	....	1	....	5	....	1	4	2	....	2	1	....	....	....	....	....	....	....	....	....	....	12	5
Twenty-second	....	....	4	....	....	1	2	....	1	....	7	....	....	....	....	....	....	....	....	....	....	....	....	....	14	1
Twenty-third	1	....	....	....	....	1	....	....	3	1	3	....	1	....	....	....	....	....	....	....	....	....	....	....	8	2
Total	20	2	34	2	68	5	78	1	81	10	111	9	23	4	4	....	....	....	2	....	9	2	....	1	430	36

TABLE E.

Showing by Months and Wards the Number of Cases of and Deaths from Smallpox for the Year 1902.

WARDS.	JAN.		FEB.		MAR.		APRIL.		MAY.		JUNE.		JULY.		AUG.		SEPT.		OCT.		NOV.		DEC.		TOTAL	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
First	2	....	2	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	5	...
Second	....	....	....	....	1	....	1	....	6	....	1	....	3	....	....	....	....	....	2	....	....	....	1	....	15	...
Third	....	....	1	....	....	....	....	....	1	....	5	....	....	....	....	....	....	....	....	....	....	....	....	....	7	...
Fourth	2	....	3	....	....	....	1	....	8	....	3	....	....	....	....	....	1	....	....	....	....	....	1	....	19	...
Fifth	....	....	1	....	2	....	1	....	1	....	....	....	....	....	....	....	....	....	....	....	2	....	2	....	9	...
Sixth	....	....	2	....	1	....	1	....	....	....	1	....	1	....	2	....	....	....	....	....	....	....	1	....	9	...
Seventh	....	....	....	....	....	....	1	....	3	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	5	...
Eighth	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	3	...
Ninth	....	....	....	....	....	....	7	....	....	....	1	....	1	....	2	....	1	....	47	....	20	....	2	....	81	...
Tenth	....	....	1	....	1	....	....	....	1	....	....	....	3	....	....	....	....	....	13	....	4	....	2	....	25	...
Eleventh	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	1
Twelfth	....	....	....	....	....	....	....	....	5	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	7	...
Thirteenth	....	....	....	....	....	....	....	....	1	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	3	...

TABLE E—Continued.

Showing by Months and Wards the Number of Cases of and Deaths from Smallpox for the Year 1902.

WARDS.	JAN.		FEB.		MAR.		APRIL.		MAY.		JUNE.		JULY.		AUG.		SEPT.		OCT.		NOV.		DEC.		TOTAL	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Fourteenth	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	1	....	3	...
Fifteenth	1	....	....	....	....	....	....	....	2	....	....	....	1	....	....	....	....	....	1	....	2	....	....	....	7	...
Sixteenth	3	....	1	....	....	....	1	....	....	....	1	....	1	....	....	....	....	....	....	....	....	....	....	....	7	...
Seventeenth	....	....	....	....	....	....	....	....	1	....	....	....	4	....	....	....	....	....	....	....	....	....	....	....	5	...
Eighteenth	....	....	....	....	....	....	....	....	1	....	1	....	....	....	....	....	....	....	1	....	....	....	....	....	3	...
Nineteenth	....	....	....	....	1	....	....	....	3	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	5	...
Twentieth	....	....	....	....	1	....	1	....	....	....	1	....	....	....	....	....	....	....	2	....	5	....	5	....	15	...
Twenty-first	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
Twenty-second	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	6	....	12	....	8	....	27	...
Twenty-third	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	...
Total	9	....	12	....	8	....	14	....	34	....	17	....	14	....	5	....	3	....	73	1	47	....	25	....	261	1

CHART No. 1.

Showing Deaths From Typhoid Fever for 22 Years, 1881-1902 Inclusive.

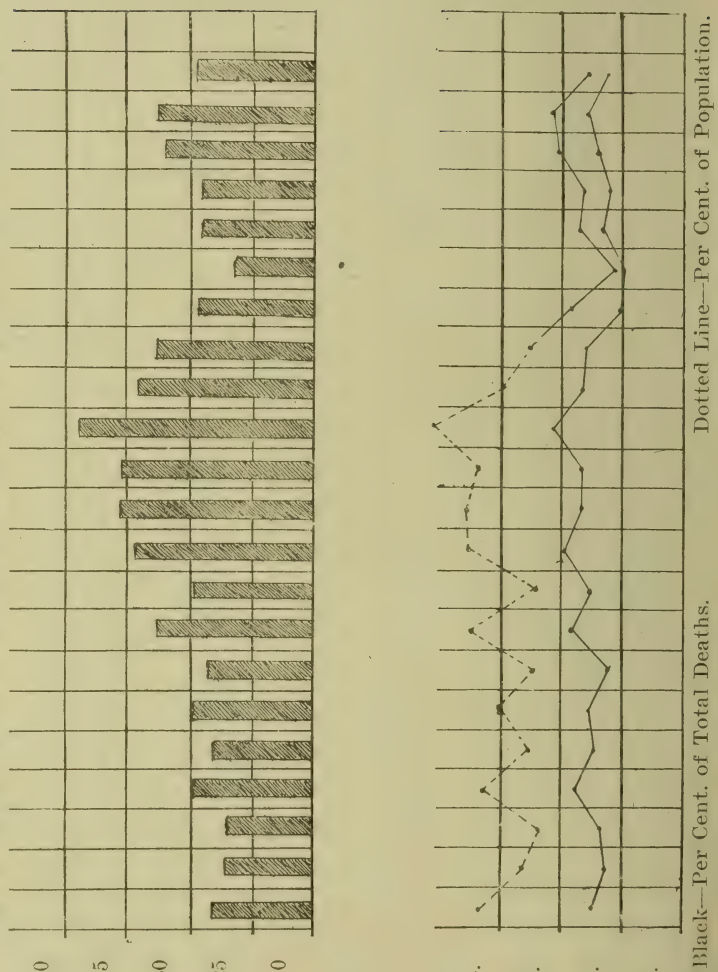
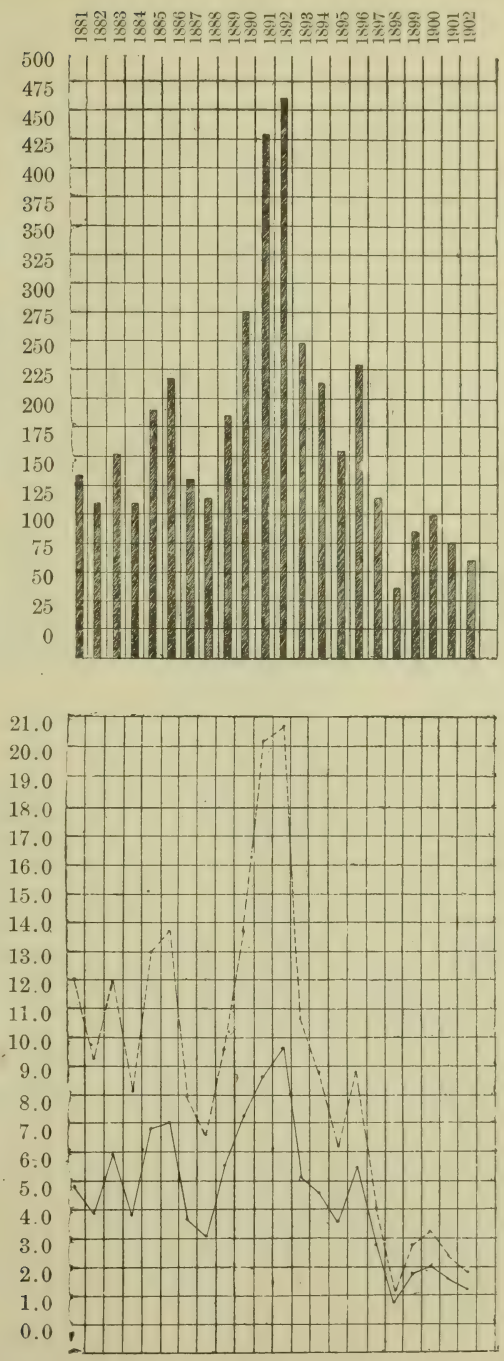


CHART No. 2.

Showing Deaths From Diphtheria and Croup for 22 Years, 1881-1902 Inclusive.

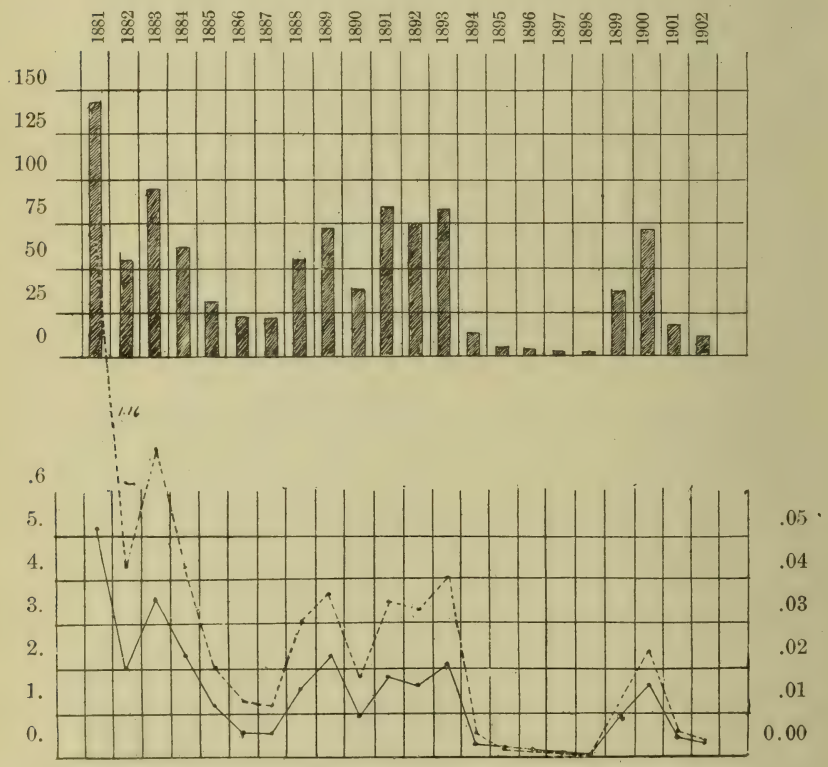


Dotted Line—Per Cent. of Population.

Black—Per Cent. of Total Deaths.

CHART No. 3.

Showing Deaths From Scarlet Fever for 22 Years, 1881-1902 Inclusive.



Black—Per Cent. of Total Deaths. Dotted Line—Per Cent. of Population.

CHART No. 4.

Showing Deaths From Measles for 22 Years, 1881-1902 Inclusive.

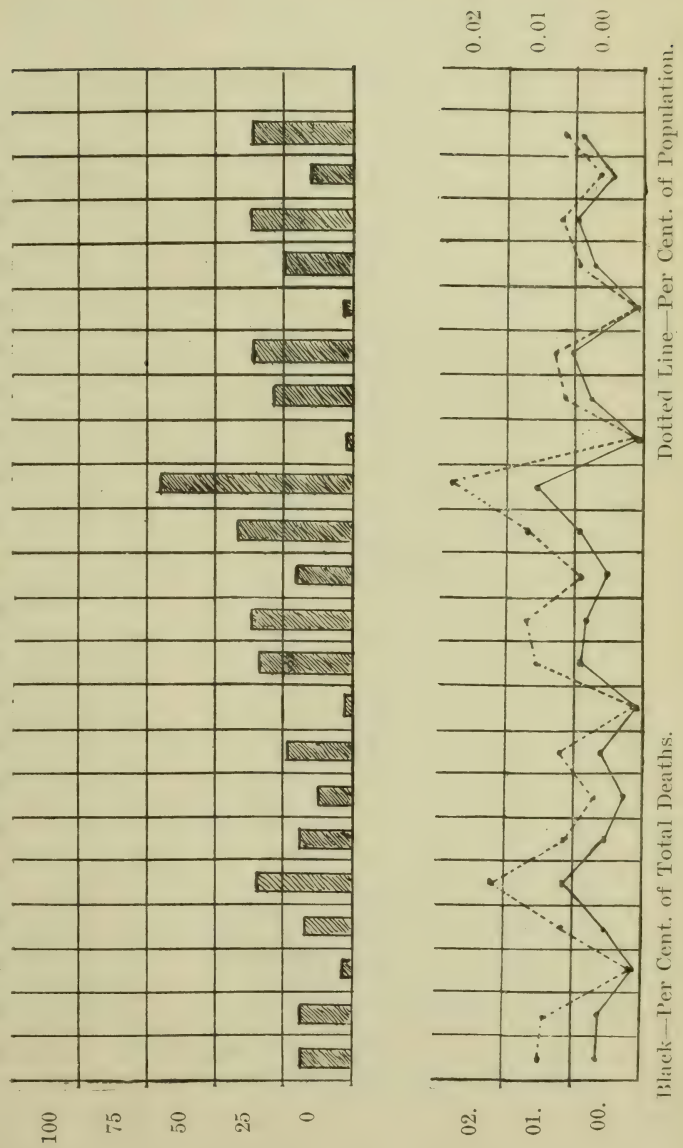
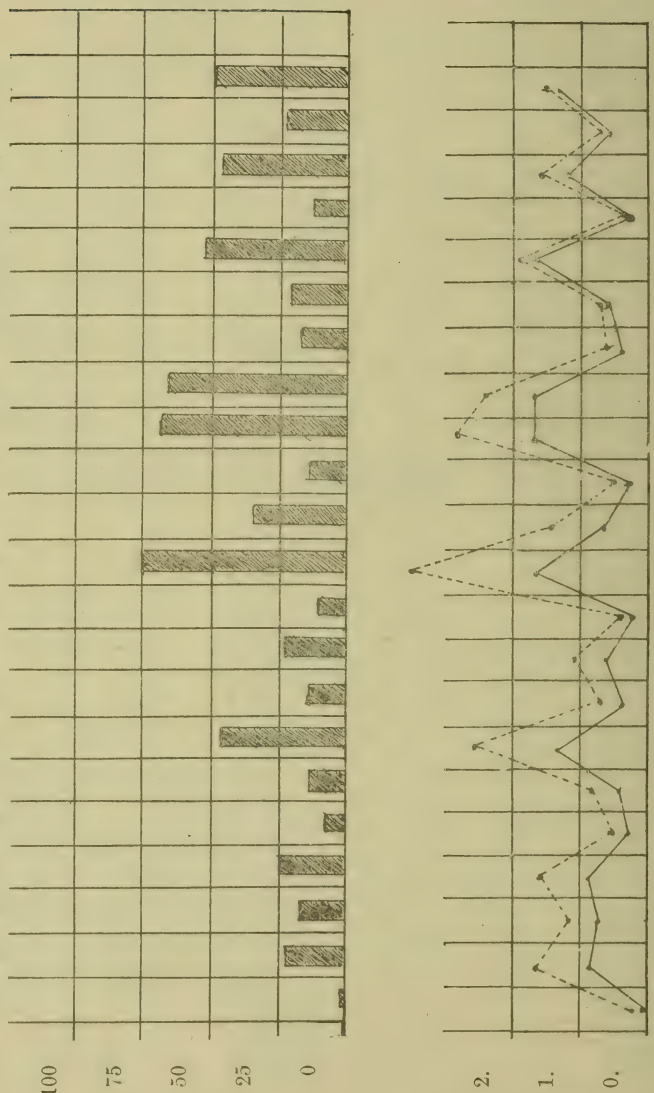


CHART No. 5.

Showing Deaths From Whooping Cough for 22 Years, 1881-1902 Inclusive.

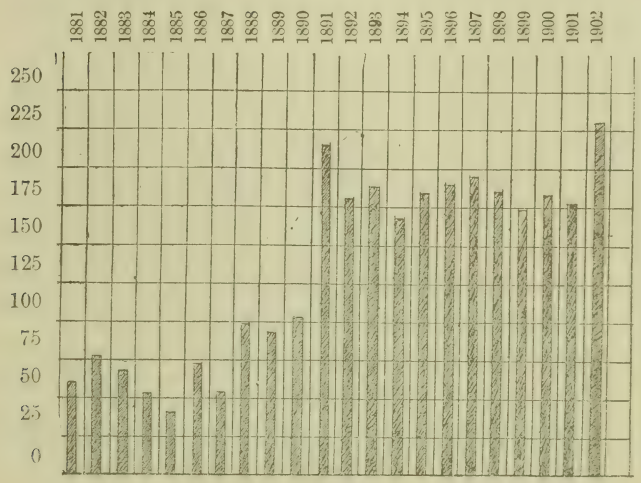


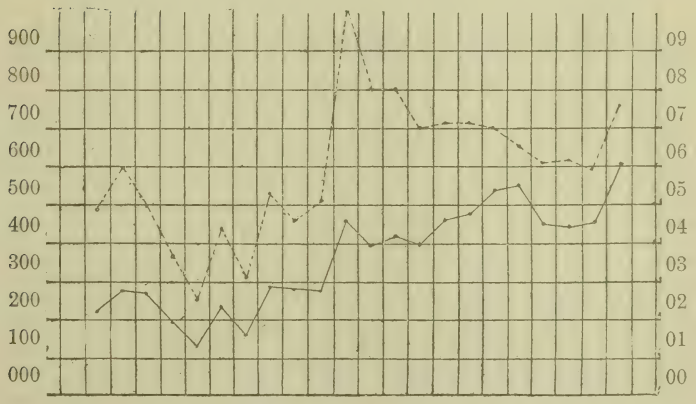
Black—Per Cent. of Total Deaths.

Dotted Line—Per Cent. of Population.

CHART No. 6

Showing Deaths From Bronchitis for 22 Years, 1881-1902 Inclusive.





Black—Per Cent of Total Deaths.

Dotted Line—Per Cent. of Population.

CHART No. 7.

Showing Deaths From Pneumonia for 22 Years, 1881-1902 Inclusive.

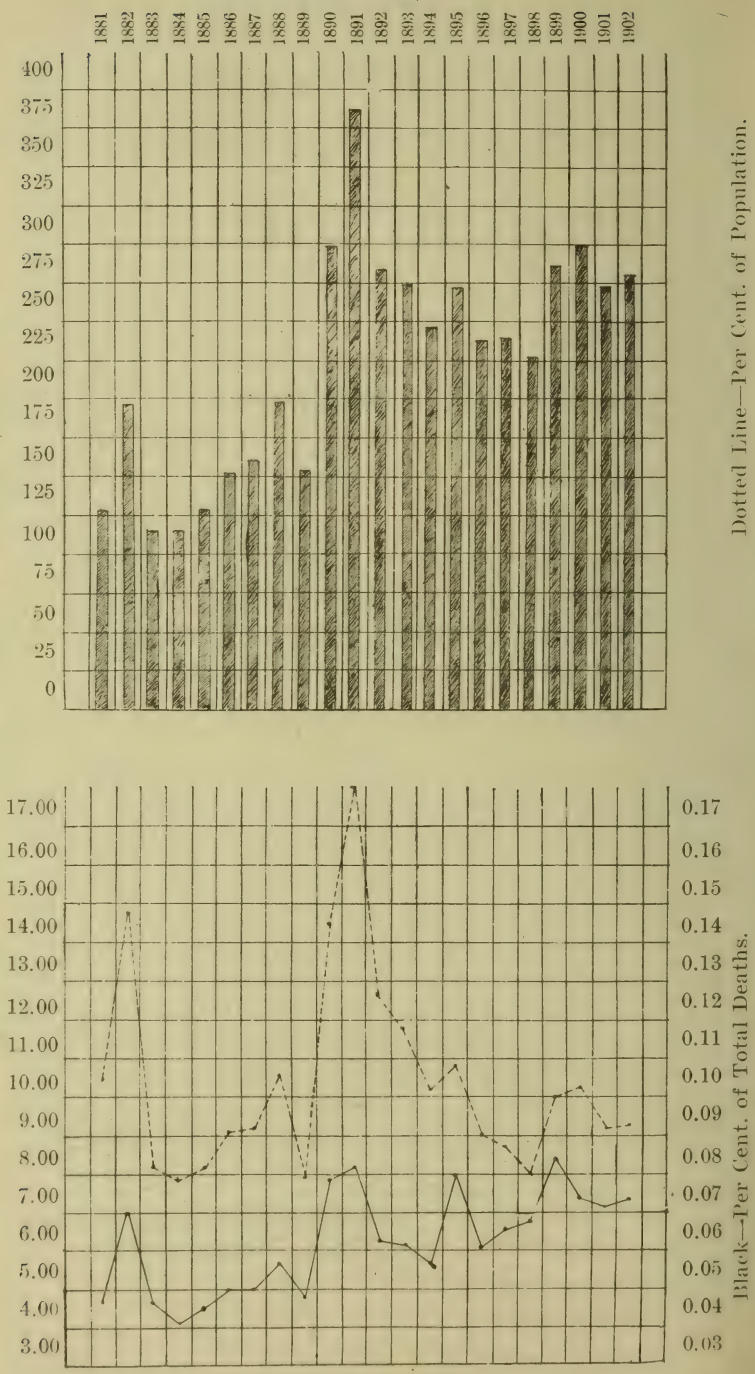
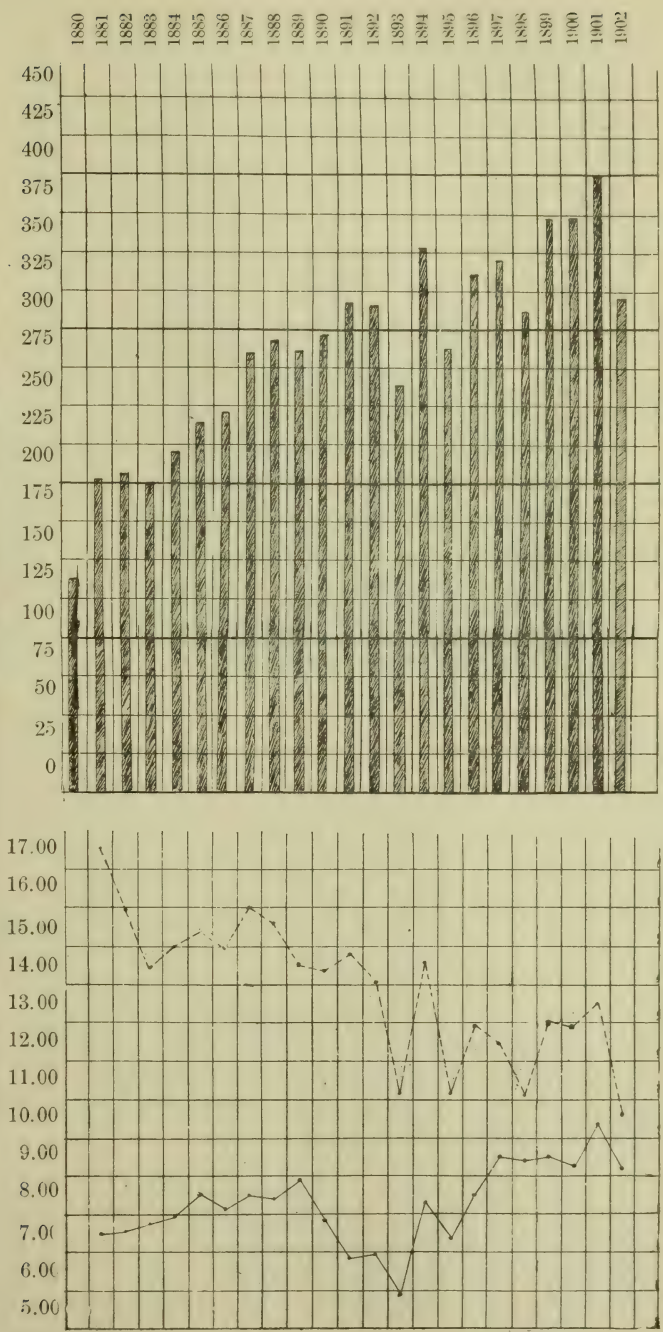


CHART No. 8.

Showing Deaths From Consumption for 22 Years, 1881-1902 Inclusive.



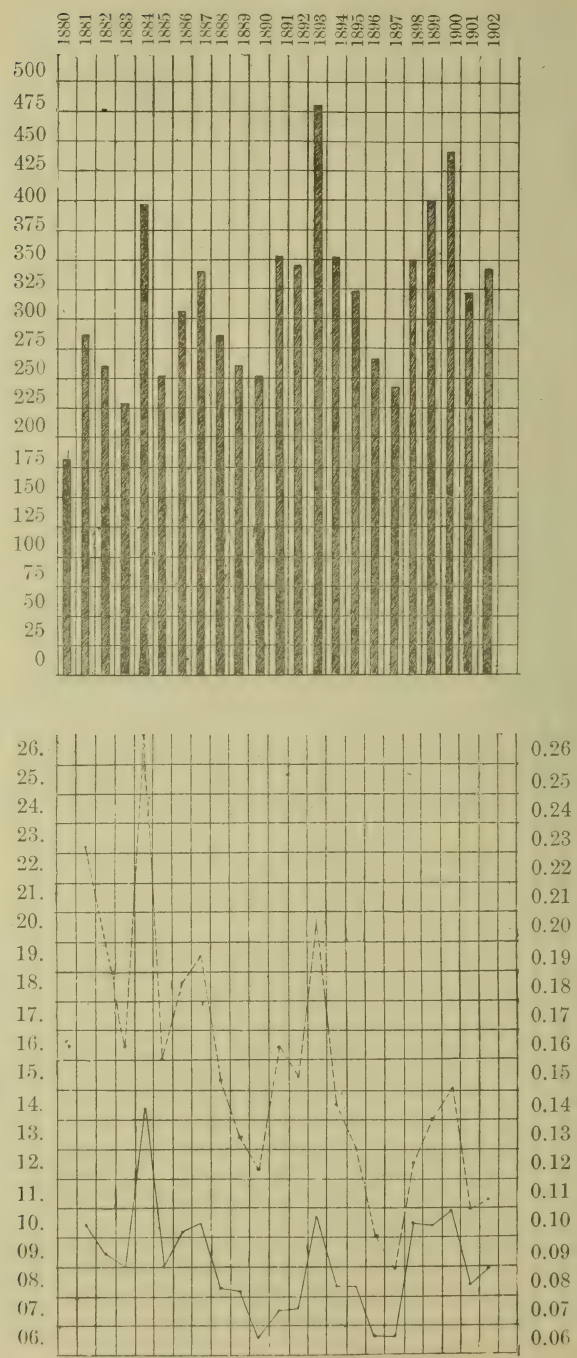
Dotted Line—Per Cent. of Population.

Black—Per Cent. of Total Deaths.

The year 1880 shows deaths of last nine months only.

CHART No. 9.

Showing Deaths From Diarrhœa for 22 Years, 1881-1902 Inclusive.



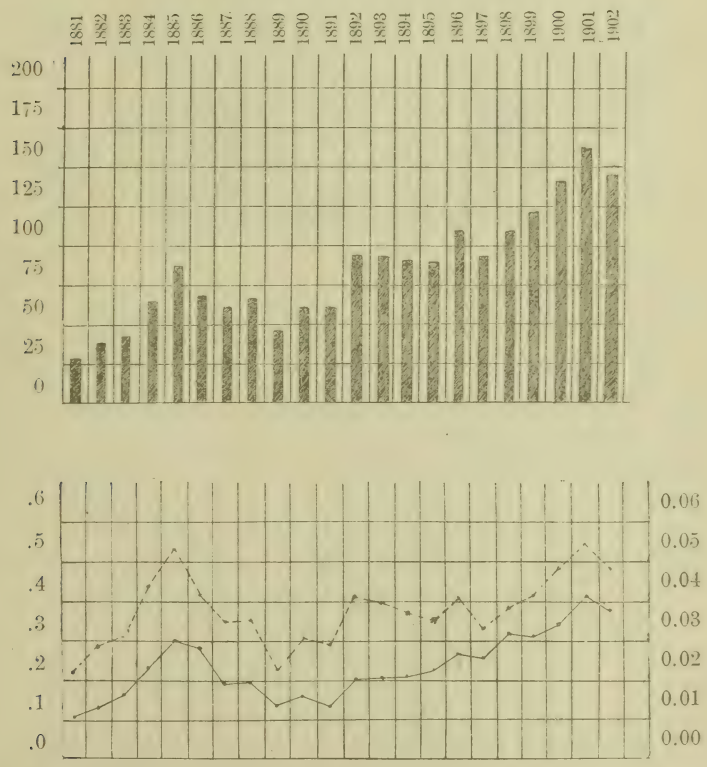
Dotted Line—Per Cent. of Population.

Black—Per Cent. of Total Deaths.

The year 1880 shows deaths of last nine months only.

CHART No. 10.

Showing Deaths From Apoplexy for 22 Years, 1881-1902 Inclusive.

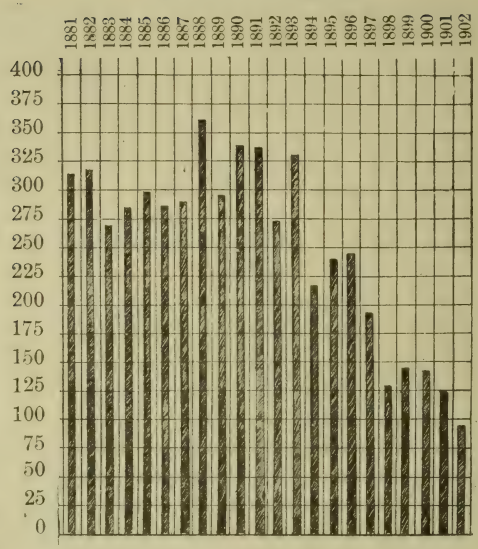


Black—Per Cent. of Total Deaths.

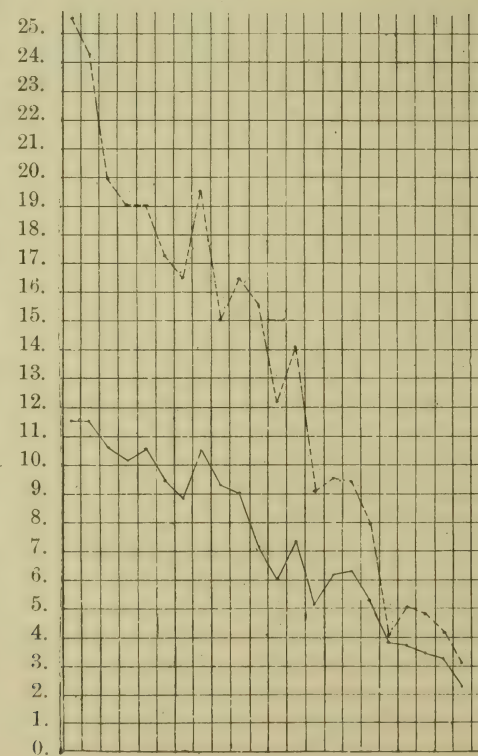
Dotted Line—Per Cent. of Population.

CHART No. 11.

Showing Deaths From Convulsions for 22 Years, 1881-1902 Inclusive.



Dotted Line—Per Cent. of Population.



Black—Per Cent. of Total Deaths.

DETAIL

MONTHLY STATISTICS

FOR 1902.

TABLE No. 1—Showing the Number of Deaths, According to The Annual Death Rate per 1,000, for the Year For the Year 1901 there were 3,833 Deaths,

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition				Nativity.		
		Male.	Female.	Single.	Married.	Widowed.	Divorced.	Milwaukee.	U. S. other than Mil.	Foreign.
TOTAL—All Causes	3796	2085	1711	1993	1231	546	26	1803	534	1459
GENERAL DISEASES	961	476	485	465	387	102	7	413	163	385
Typhoid Fever	48	29	19	23	24	1	.....	17	16	15
Measles	36	19	17	36	.....	.....	.....	32	2	2
Scarlet Fever	10	4	6	10	.....	.....	.....	8	2	.....
Whooping Cough	49	23	26	49	.....	.....	.....	47	1	1
Diphtheria and Memb. Croup	85	44	41	83	1	.....	1	70	14	1
Other Epidemic Diseases	14	5	9	6	3	5	.....	4	1	9
Pulmonary Tuberculosis	320	162	158	143	153	22	2	133	59	128
Other Tubercular Diseases	75	43	32	49	24	1	1	49	10	16
Cancer	208	87	121	16	134	57	1	11	38	159
Other General Diseases	116	60	56	50	48	16	2	42	20	54
LOCAL DISEASES	2568	1383	1185	1414	721	417	16	1303	321	944
Meningitis	93	42	51	72	18	2	1	63	14	16
Apoplexy	144	69	75	14	70	60	.....	12	18	114
Other Dis. of Brain & Membrane	32	14	18	10	16	5	1	10	11	11
Paralysis	17	11	6	2	10	5	.....	2	2	13
Convulsions	94	59	35	93	1	.....	.....	92	2	.....
Other Nervous Diseases	25	12	13	7	11	6	1	7	4	14
Organic Heart Diseases	254	141	113	51	124	77	2	39	41	174
Other Dis. of Circulating System	49	23	26	3	23	22	1	2	11	36
Bronchitis	230	126	104	156	34	40	.....	145	20	65
Pneumonia	280	167	113	142	91	44	3	122	44	114
Broncho-Pneumonia	104	66	38	90	9	5	.....	85	8	11
Asthma	16	10	6	.....	10	6	.....	.....	2	14
Pleurisy	13	10	3	5	4	4	.....	5	.....	8
Other Respiratory Diseases	37	24	13	17	16	4	.....	15	4	18
Gastritis	48	33	15	31	10	5	2	29	5	14
Diarrhoeal Diseases	340	193	147	318	13	9	.....	297	19	24
Appendicitis and Peritonitis	69	34	35	44	22	3	.....	31	20	18
Hernia and Intestinal Obstruction	31	13	18	14	12	4	1	13	5	13
Cirrhosis of Liver	30	22	8	4	19	6	1	5	3	22
Other Digestive Diseases	51	30	21	27	15	9	.....	23	6	22
Nephritis	156	84	72	35	82	38	1	29	33	94
Other Urinary Diseases	22	19	3	6	14	2	.....	4	7	11
Dis. of Female Generative System	24	.....	24	6	17	1	.....	3	10	11
Puerperal Septicaemia	20	.....	20	.....	20	.....	.....	4	6	10
Other Diseases of Pregnancy	27	.....	27	.....	27	.....	.....	6	10	11
Dis. of Skin and Cellular Tissue	15	6	9	8	4	3	.....	8	1	6
Locomotor System	3	2	1	2	.....	1	.....	2	.....	1
Malformations	18	13	5	18	.....	.....	.....	17	1	.....
Congenital Debility	234	120	114	234	.....	.....	.....	233	1	.....
Senile Debility	92	40	52	5	29	56	2	.....	13	79
VIOLENCE	262	222	40	111	122	26	3	84	50	128
Suicide	69	57	12	25	34	8	2	22	10	37
Accidental	188	161	27	82	87	18	1	61	38	89
Homicide	5	4	1	4	1	.....	.....	1	2	2
Other Causes—Ill Defined	5	4	1	3	1	1	.....	3	.....	2

Cause, Sex, Social Condition, Nativity and Age, for the Year 1902.
was 12.65 on an Estimated Population of 300,000.
representing an Annual Death Rate of 12.99 per 1,000 population.

	AGE.																					
Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	90 to 95.	95 to 100.
963	216	87	54	33	132	59	119	144	150	148	172	162	149	147	147	181	193	169	168	123	54	21	5
74	41	31	22	10	59	18	61	81	67	63	71	59	49	51	49	53	42	23	19	14	3	1	...
1	....	1	....	....	3	2	5	6	7	7	7	4	2	...	...	3	...	...	...	...	...	...	...
16	10	7	1	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
...	....	3	1	1	4	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
26	14	5	1	2	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
5	12	11	15	4	31	3	2	....	1	....	1	....	....	....	....	....	....	....	....	....	....	....	...
1	....	1	....	....	2	....	....	1	....	....	2	....	....	....	....	2	1	1	2	1	....	....	...
3	....	1	....	....	3	4	44	56	40	40	38	20	25	13	9	8	8	4	3	....	1	....	...
6	2	1	3	2	10	6	3	8	10	5	5	5	1	1	2	3	2	....	....	....	....	....	...
1	....	1	1	....	....	1	....	2	1	5	11	22	16	30	31	29	26	12	6	11	1	1	...
15	3	....	....	1	3	1	7	8	8	6	7	8	5	7	7	8	5	6	8	2	1	....	...
883	173	54	29	18	58	32	34	42	60	73	76	77	84	81	87	105	140	139	144	105	50	20	4
20	13	8	3	3	9	7	4	3	4	4	4	4	2	1	2	....	....	1	....	....	....	1	...
1	1	....	....	....	....	....	2	2	2	3	6	5	9	4	11	18	16	19	19	15	8	3	...
4	1	....	....	....	2	1	....	1	1	1	1	2	4	1	2	2	6	2	1	....	....	....	...
...	....	....	1	....	....	1	....	....	....	....	....	....	1	2	2	4	3	....	....	1	....	2	...
82	8	2	....	....	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	...
2	....	1	....	....	....	....	1	1	1	....	1	3	1	....	3	3	3	2	2	1	....	....	...
1	1	....	....	1	7	7	8	3	8	6	10	14	14	16	27	23	25	29	32	15	6	1	...
...	....	....	....	....	....	1	....	....	2	2	1	1	1	4	3	7	7	5	6	7	1	1	...
113	26	7	2	1	2	1	....	....	....	1	1	1	2	3	2	5	10	14	21	10	7	1	...
61	28	8	7	6	8	3	4	5	6	12	18	13	15	12	11	11	15	12	9	8	7	1	...
45	26	3	5	4	6	1	....	....	1	1	....	1	....	....	1	3	3	2	2	....	....	....	...
...	....	....	....	....	....	....	....	....	....	....	....	2	....	....	1	4	1	4	4	....	....	....	...
...	1	1	....	....	1	....	1	....	....	....	....	1	....	1	....	3	2	1	....	1	....	....	...
8	1	....	....	....	1	....	1	2	2	4	2	2	1	2	2	1	4	2	1	1	....	....	...
20	7	1	2	....	....	....	....	....	....	....	1	1	2	2	3	....	3	2	2	2	....	....	...
233	49	21	7	....	3	1	2	....	1	3	1	2	2	....	1	3	2	5	3	....	....	1	...
6	....	....	1	2	10	8	5	7	9	6	2	3	2	3	1	....	3	....	....	....	1	....	...
8	3	....	....	....	....	....	2	....	1	....	....	2	3	3	1	2	2	2	2	....	....	....	...
...	....	....	....	....	....	....	....	....	2	1	1	2	4	5	2	2	4	2	3	2	....	....	...
17	1	1	....	....	....	1	1	2	....	3	....	2	....	2	1	3	5	2	7	2	1	....	...
5	1	1	1	1	6	....	1	5	8	6	9	10	18	12	11	7	16	15	13	6	3	1	...
1	1	....	....	....	1	....	....	....	2	....	1	1	2	2	....	1	2	4	2	....	2	....	...
...	....	....	....	....	....	....	1	3	2	6	4	1	....	5	....	....	....	1	1	....	....	....	...
...	....	....	....	....	....	....	1	2	2	6	8	1	....	....	....	....	....	....	....	....	....	....	...
...	....	....	....	....	....	....	....	6	6	7	5	3	....	....	....	....	....	....	....	....	....	....	...
7	1	....	....	....	....	....	....	....	....	....	....	....	1	1	....	1	1	1	....	1	....	1	...
...	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	...
17	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
232	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
...	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	7	12	14	33	14	7	4
5	2	2	3	5	15	9	24	20	23	12	25	25	16	15	11	21	11	7	5	4	1	....	1
...	....	....	....	....	....	1	9	6	5	5	13	6	4	4	4	4	4	2	1	1	....	....	...
5	2	2	3	5	15	8	15	11	17	6	12	19	12	11	7	17	7	5	4	3	1	....	1
...	....	....	....	....	....	....	....	3	1	1	....	....	....	....	....	....	....	....	....	....	....	....	...
1	....	....	....	....	....	....	....	....	1	....	....	1	....	....	....	2	....	....	....	....	....	....	...

TABLE No. 2—Deaths According to Cause, Sex,

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.				Nativity.		
		Male.	Female.	Single.	Married.	Widowed.	Divorced.	Milwaukee.	U. S. other than Mil.	Foreign.
TOTAL—All Causes	324	177	147	141	126	56	1	133	48	143
GENERAL DISEASES	83	42	41	32	39	11	1	32	18	33
Typhoid Fever	3	3	.....	1	2	.....	.....	2	1	.....
Measles	2	1	1	2	.....	.....	.....	2	.....	.....
Scarlet Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Whooping Cough	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diphtheria and Memb. Croup	4	2	2	4	.....	.....	.....	4	.....	.....
Other Epidemic Diseases	2	1	1	.....	1	1	.....	.....	.....	2
Pulmonary Tuberculosis	38	22	16	16	18	3	1	17	11	10
Other Tubercular Diseases	4	3	1	3	1	.....	.....	3	.....	1
Cancer	18	4	14	1	13	4	.....	1	3	14
Other General Diseases	12	6	6	5	4	3	.....	3	3	6
LOCAL DISEASES	221	117	104	103	76	42	.....	94	28	99
Meningitis	7	3	4	5	1	1	.....	1	4	2
Apoplexy	14	9	5	1	9	4	.....	.....	1	13
Other Dis. of Brain & Membranes	7	4	3	2	4	1	.....	2	2	3
Paralysis	1	1	.....	.....	1	.....	.....	.....	1	.....
Convulsions	10	6	4	10	.....	.....	.....	10	.....	.....
Other Nervous Diseases	1	1	.....	.....	1	.....	.....	.....	.....	1
Organic Heart Diseases	23	12	11	5	12	6	.....	6	2	15
Other Dis. of Circulatory System.	4	2	2	.....	2	2	.....	.....	.....	4
Bronchitis	15	9	6	11	1	3	.....	11	2	2
Pneumonia	30	17	13	14	10	6	.....	14	3	13
Broncho-Pneumonia	7	5	2	5	1	1	.....	4	2	1
Asthma	4	2	2	.....	2	2	.....	.....	.....	4
Pleurisy	2	1	1	.....	2	.....	.....	.....	.....	2
Other Respiratory Diseases	2	1	1	1	1	.....	.....	1	.....	1
Gastritis	3	2	1	2	.....	1	.....	2	.....	1
Diarrhoeal Diseases	12	6	6	12	.....	.....	.....	12	.....	.....
Appendicitis and Peritonitis	6	.....	6	3	3	.....	.....	1	1	4
Hernia and Intestinal Obstruction	2	.....	2	1	1	.....	.....	1	.....	1
Cirrhosis of Liver	3	2	1	.....	3	.....	.....	.....	.....	3
Other Digestive Diseases	8	6	2	6	2	.....	.....	6	.....	2
Nephritis	18	11	7	2	12	4	.....	2	5	11
Other Urinary Diseases	2	2	.....	1	.....	1	.....	1	.....	1
Dis. of Female Generative System	2	.....	2	2	.....	.....	.....	1	1	.....
Puerperal Septicaemia	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Diseases of Pregnancy	3	.....	3	.....	3	.....	.....	1	1	1
Dis. of Skin and Cellular Tissue	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Locomotor System	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Malformations	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Congenital Debility	19	11	8	19	.....	.....	.....	18	1	.....
Senile Debility	16	4	12	1	5	10	.....	.....	2	14
VIOLENCE	18	16	2	4	11	3	.....	6	2	10
Suicides	5	4	1	1	3	1	.....	3	.....	2
Accidents	13	12	1	3	8	2	.....	3	2	8
Homicides	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Causes and Ill-Defined	2	2	.....	2	.....	.....	.....	1	.....	1

Social Condition, Nativity and Age, for January, 1902.

AGE.																							
Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	90 to 95.	95 to 100.
68	11	2	4	3	12	6	5	15	15	10	22	8	17	14	13	17	16	23	25	11	2	5	...
4	1	....	1	....	4	2	3	11	10	5	11	3	3	4	3	5	3	3	5	2	...	...	...
1	....	....	....	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	...
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1	....	....	....	....	....	1	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	...
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2	....	....	....	....	....	....	1	1	....	....	....	....	1	....	....	3	....	1	2	1	....	....	...
63	10	2	3	3	6	4	1	2	3	5	9	5	14	8	10	9	13	17	19	8	2	5	...
..	1	1	....	1	....	....	....	....	....	1	2	....	....	....	....	....	....	....	....	....	....	1	...
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9	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
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7	2	....	....	....	1	....	....	....	....	....	1	....	....	....	1	....	1	....	1	1	....	....	...
4	4	....	3	1	....	....	1	1	....	1	1	2	4	....	1	1	2	3	....	....	1	....	...
2	1	....	....	....	2	....	....	....	....	....	....	....	....	....	....	1	....	....	1	....	....	....	...
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6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....	....	...
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..	....	....	....	....	2	....	....	1	2	....	....	....	....	2	....	2	....	2	1	1	....	....	...
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TABLE No. 3—Deaths According to Age, Sex,

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition				Nativity.		
		Male.	Female.	Single.	Married.	Widowed.	Divorced.	Milwaukee.	U. S. other than Mil.	Foreign.
TOTAL—All Causes	274	148	126	140	88	46	.....	116	38	120
GENERAL DISEASES	54	26	28	29	14	11	.....	24	8	22
Typhoid Fever	3	3	.....	1	2	.....	.....	1	2	.....
Measles	2	1	1	2	.....	.....	.....	2	.....	.....
Scarlet Fever	2	.....	2	2	.....	.....	.....	1	1	.....
Whooping Cough	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diphtheria and Memb. Croup	4	2	2	4	.....	.....	.....	3	1	.....
Other Epidemic Diseases	1	.....	1	.....	.....	1	.....	.....	.....	1
Pulmonary Tuberculosis	17	8	9	10	4	3	.....	7	3	7
Other Tubercular Diseases	6	2	4	4	2	.....	.....	4	.....	2
Cancer	10	6	4	1	3	6	.....	1	1	8
Other General Diseases	9	4	5	5	3	1	.....	5	.....	4
LOCAL DISEASES	202	107	95	103	64	35	.....	87	27	88
Meningitis	10	4	6	8	2	.....	.....	8	1	1
Apoplexy	12	6	6	1	8	3	.....	1	.....	11
Other Dis. of Brain & Membranes	5	3	2	3	2	.....	.....	3	2	.....
Paralysis	1	.....	1	.....	.....	1	.....	.....	.....	1
Convulsions	10	8	2	10	.....	.....	.....	10	.....	.....
Other Nervous Diseases	1	.....	1	.....	.....	1	.....	.....	.....	1
Organic Heart Diseases	15	9	6	1	9	5	.....	.....	2	13
Other Dis. of Circulatory System.	8	2	6	.....	3	5	.....	.....	3	5
Bronchitis	25	12	13	13	5	7	.....	13	.....	12
Pneumonia	24	15	9	14	6	4	.....	8	7	9
Broncho-Pneumonia	4	3	1	4	.....	.....	.....	3	1	.....
Asthma	1	.....	1	.....	1	.....	.....	.....	.....	1
Pleurisy	1	1	.....	.....	1	.....	.....	.....	.....	1
Other Respiratory Diseases	2	.....	2	1	.....	1	.....	.....	.....	2
Gastritis	2	2	.....	2	.....	.....	.....	1	.....	1
Diarrhoeal Diseases	6	5	1	6	.....	.....	.....	5	1	.....
Appendicitis and Peritonitis	4	2	2	3	1	.....	.....	2	2	.....
Hernia and Intestinal Obstruction	3	2	1	2	1	.....	.....	2	.....	1
Cirrhosis of Liver	1	1	.....	1	.....	.....	.....	.....	.....	1
Other Digestive Diseases	13	5	8	7	3	3	.....	6	2	5
Nephritis	14	7	7	2	10	2	.....	2	2	10
Other Urinary Diseases	2	2	.....	1	1	.....	.....	.....	1	1
Dis. of Female Generative System	5	.....	5	1	3	1	.....	1	1	3
Puerperal Septicaemia	2	.....	2	.....	2	.....	.....	1	.....	1
Other Diseases of Pregnancy	2	.....	2	.....	2	.....	.....	.....	1	1
Dis. of Skin and Cellular Tissue	1	.....	1	1	.....	.....	.....	1	.....	.....
Locomotor System	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Malformations	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Congenital Debility	20	11	9	20	.....	.....	.....	20	.....	.....
Senile Debility	8	7	1	2	4	2	.....	.....	1	7
VIOLENCE	18	15	3	8	10	.....	.....	5	3	10
Suicides	3	3	.....	2	1	.....	.....	1	.....	2
Accidents	14	11	3	5	9	.....	.....	4	3	7
Homicides	1	1	.....	1	.....	.....	.....	.....	.....	1
Other Causes and Ill-Defined	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Social Condition, Nativity and Age, for February, 1902.

AGE.																							
Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	90 to 95.	95 to 100.
72	8	7	2	1	5	3	10	10	8	15	13	13	9	9	10	11	19	12	19	11	6	...	1
4	....	2	....	....	4	2	5	5	3	5	3	5	1	1	3	3	1	1	4	1	1	...	...
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1	....	....	....	....	....	1	....	1	1	1	....	1	...	...	...	1	...	1	1	...	...	...	...
68	8	5	1	1	1	1	3	3	3	10	6	6	6	7	6	7	18	11	15	10	5	...	1
3	....	2	1	....	....	1	1	....	....	....	1	1	...	...	...	...	...	...	...	...	...	...	...
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8	1	3	....	1	....	....	....	....	....	....	....	1	...	...	...	1	1	3	4	1	1	...	...
6	4	....	....	....	1	....	....	1	1	1	1	...	2	...	2	1	1	...	2	1	...	...	...
4	....	....	....	....	....	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
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4	2	....	....	....	....	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
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5	....	....	....	....	....	....	....	1	....	1	....	...	...	1	1	1	...	...	2	1	...	...	...
1	....	....	....	....	....	....	....	....	1	2	1	1	...	1	...	...	5	1	...	1	...	...	...
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..	....	....	1	....	....	....	2	2	2	....	4	2	2	1	1	1	...	...	...	...	...	...	...
..	....	....	....	....	....	....	....	....	1	....	1	...	1	...	...	...	...	...	...	...	...	...	...
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TABLE No. 4—Deaths According to Cause, Sex,

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.				Nativity.		
		Male.	Female.	Single.	Married.	Widowed.	Divorced.	Milwaukee.	U. S. other than Mil.	Foreign.
TOTAL—All Causes	320	174	146	155	103	60	2	135	55	130
GENERAL DISEASES	73	40	33	34	28	11	.....	25	12	36
Typhoid Fever	4	1	3	1	2	1	.....	2	.....	2
Measles	5	3	2	5	.....	.....	.....	4	1	....
Scarlet Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Whooping Cough	1	1	.....	1	.....	.....	.....	1	.....	.....
Diphtheria and Memb. Croup	5	5	.....	5	.....	.....	.....	5	.....	.....
Other Epidemic Diseases	1	.....	1	1	.....	.....	.....	1	.....	.....
Pulmonary Tuberculosis	27	15	12	11	14	2	.....	6	6	15
Other Tubercular Diseases	4	4	.....	4	.....	.....	.....	2	1	1
Cancer	15	7	8	1	9	5	.....	.....	4	11
Other General Diseases	11	4	7	5	3	3	.....	4	.....	7
LOCAL DISEASES	231	121	110	114	66	49	2	105	40	86
Meningitis	8	4	4	5	3	.....	.....	6	1	1
Apoplexy	16	6	10	1	8	7	.....	1	4	11
Other Dis. of Brain & Membranes	9	3	6	2	4	3	.....	3	4	2
Paralysis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Convulsions	11	5	6	11	.....	.....	.....	10	1	.....
Other Nervous Diseases	1	1	.....	.....	1	.....	.....	.....	.....	1
Organic Heart Diseases	25	10	15	5	12	8	.....	5	5	15
Other Dis. of Circulatory System	6	5	1	1	3	2	.....	.....	2	4
Bronchitis	24	14	10	18	2	4	.....	16	3	5
Pneumonia	34	28	6	16	13	5	.....	11	8	15
Broncho-Pneumonia	16	9	7	12	2	2	.....	12	2	2
Asthma	1	1	.....	.....	1	.....	.....	.....	.....	1
Pleurisy	1	1	.....	.....	.....	1	.....	.....	.....	1
Other Respiratory Diseases	1	.....	1	.....	.....	1	.....	.....	.....	1
Gastritis	3	1	2	1	1	.....	1	2	.....	1
Diarrhoeal Diseases	5	2	3	3	1	1	.....	3	.....	2
Appendicitis and Peritonitis	7	2	5	4	2	1	.....	3	3	1
Hernia and Intestinal Obstruction	3	1	2	1	1	1	.....	1	.....	2
Cirrhosis of Liver	2	2	.....	.....	1	1	.....	.....	1	1
Other Digestive Diseases	3	2	1	3	.....	.....	.....	3	.....	.....
Nephritis	14	7	7	6	3	5	.....	5	2	7
Other Urinary Diseases	2	2	.....	2	.....	.....	.....	1	1	.....
Dis. of Female Generative System	3	.....	3	.....	3	.....	.....	.....	1	2
Puerperal Septicaemia	4	.....	4	.....	4	.....	.....	.....	1	3
Other Diseases of Pregnancy	1	.....	1	.....	1	.....	.....	.....	.....	1
Dis. of Skin and Cellular Tissue	3	.....	3	2	.....	1	.....	2	.....	1
Locomotor System	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Malformations	1	1	.....	1	.....	.....	.....	1	.....	.....
Congenital Debility	20	10	10	20	.....	.....	.....	20	.....	.....
Senile Debility	7	4	3	.....	.....	6	1	.....	1	6
VIOLENCE	16	13	3	7	9	.....	.....	5	3	8
Suicides	6	5	1	2	4	.....	.....	3	.....	3
Accidents	9	8	1	5	4	.....	.....	2	3	4
Homicides	1	.....	1	.....	1	.....	.....	.....	.....	1
Other Causes and Ill-Defined	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Social Condition, Nativity and Age for March, 1902.

AGE.																						
Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	90 to 95.	95 to 100.
80	22	5	1	2	6	3	11	9	17	12	12	12	16	10	16	16	17	15	18	11	4	4	1
7	6	2	....	....	2	1	6	5	5	7	4	3	5	3	2	4	5	2	3	....	1	....	....
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73	16	2	1	2	4	1	2	3	11	4	7	8	10	7	14	11	9	12	15	11	3	4	1
4	1	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	1	....	....	....	....	....
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13	5	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	2	2	....	1	....
5	5	1	1	....	....	1	1	1	1	....	1	5	1	....	3	1	1	4	1	....	1	....	....
6	3	1	....	1	1	....	....	....	....	1	....	....	....	....	1	....	1	1	....	....	....	....	....
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TABLE No. 5—Deaths According to Cause, Sex,

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.				Nativity.		
		Male.	Female.	Single.	Married.	Widowed.	Divorced.	Milwaukee.	U. S. other than Mil.	Foreign.
TOTAL—All Causes	321	175	146	189	94	36	2	173	33	115
GENERAL DISEASES	85	42	43	47	28	8	2	44	9	32
Typhoid Fever	1	.....	1	.....	1	.....	.....	.....	.....	1
Measles	1	1	.....	1	.....	.....	.....	1	.....	.....
Scarlet Fever	2	.....	2	2	.....	.....	.....	2	.....	.....
Whooping Cough	3	2	1	3	.....	.....	.....	3	.....	.....
Diphtheria and Memb. Croup	17	10	7	16	.....	.....	1	13	4	.....
Other Epidemic Diseases	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pulmonary Tuberculosis	25	12	13	15	9	1	.....	11	3	11
Other Tubercular Diseases	11	6	5	5	6	.....	.....	9	1	1
Cancer	18	6	12	1	10	7	.....	1	.....	17
Other General Diseases	7	5	2	4	2	.....	1	4	1	2
LOCAL DISEASES	216	116	100	135	54	27	.....	121	23	72
Meningitis	7	1	6	6	1	.....	.....	5	1	1
Apoplexy	7	3	4	1	2	4	.....	.....	1	6
Other Dis. of Brain & Membranes	2	.....	2	2	.....	.....	.....	2	.....	.....
Paralysis	1	1	.....	.....	1	.....	.....	.....	.....	1
Convulsions	9	4	5	9	.....	.....	.....	9	.....	.....
Other Nervous Diseases	4	3	1	3	1	.....	.....	3	.....	1
Organic Heart Diseases	18	7	11	4	10	4	.....	1	2	15
Other Dis. of Circulatory System	4	2	2	.....	1	3	.....	.....	1	3
Bronchitis	37	17	20	32	3	2	.....	29	3	5
Pneumonia	37	23	14	17	12	8	.....	16	3	18
Broncho-Pneumonia	21	13	8	19	2	.....	.....	19	1	1
Asthma	1	1	.....	.....	1	.....	.....	.....	.....	1
Pleurisy	2	2	.....	2	.....	.....	.....	2	.....	.....
Other Respiratory Diseases	2	1	1	2	.....	.....	.....	2	.....	.....
Gastritis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diarrhoeal Diseases	12	6	6	10	2	.....	.....	10	1	1
Appendicitis and Peritonitis	7	6	1	6	1	.....	.....	3	3	1
Hernia and Intestinal Obstruction	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cirrhosis of Liver	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Digestive Diseases	3	3	.....	1	1	1	.....	1	.....	2
Nephritis	8	4	4	1	6	1	.....	1	2	5
Other Urinary Diseases	3	3	.....	1	2	.....	.....	1	1	1
Dis. of Female Generative System	3	.....	3	1	2	.....	.....	.....	2	1
Puerperal Septicaemia	3	.....	3	.....	3	.....	.....	.....	1	2
Other Diseases of Pregnancy	1	.....	1	.....	1	.....	.....	.....	.....	1
Dis. of Skin and Cellular Tissue	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Locomotor System	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Malformations	3	3	.....	3	.....	.....	.....	2	1	.....
Congenital Debility	15	10	5	15	.....	.....	.....	15	.....	.....
Senile Debility	6	3	3	.....	2	4	.....	.....	.....	6
VIOLENCE	19	17	2	7	12	.....	.....	7	1	11
Suicides	4	4	.....	2	2	.....	.....	.....	.....	4
Accidents	15	13	2	5	10	.....	.....	7	1	7
Homicides	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Causes and Ill-Defined	1	.....	1	.....	.....	1	.....	1	.....	.....

Social Condition, Nativity and Age, for April, 1902.

AGE.																						
Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	90 to 95.	95 to 100.
86	21	10	5	3	21	3	17	14	8	14	12	22	4	10	7	15	8	14	11	10	4	2	...
6	3	4	4	....	10	....	10	10	2	6	4	7	1	3	2	5	3	2	...	3	...	...	...
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2	....	....	....	....	....	....	1	....	....	2	1	1	...	...	...	...	...	...	...	...	...	...	...
80	18	6	1	1	11	2	6	4	3	6	6	11	3	5	5	8	5	11	11	7	4	2	...
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23	5	3	....	....	1	....	....	....	....	....	....	...	...	...	...	...	1	2	...	1	1	...	...
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TABLE No. 6—Deaths According to Cause, Sex,

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.				Nativity.		
		Male.	Female.	Single.	Married.	Widowed.	Divorced.	Milwaukee.	U. S. other than Mil.	Foreign.
TOTAL—All Causes	309	163	146	161	100	45	3	141	34	134
GENERAL DISEASES	80	37	43	40	31	9	.....	32	13	35
Typhoid Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Measles	10	5	5	10	.....	.....	.....	9	.....	1
Scarlet Fever	2	2	.....	2	.....	.....	.....	1	1	.....
Whooping Cough	2	.....	2	2	.....	.....	.....	2	.....	.....
Diphtheria and Memb. Croup	5	.....	5	5	.....	.....	.....	5	.....	.....
Other Epidemic Diseases	1	1	.....	1	.....	.....	.....	.....	.....	1
Pulmonary Tuberculosis	24	12	12	9	12	3	.....	8	4	12
Other Tubercular Diseases	2	.....	2	2	.....	.....	.....	2	.....	.....
Cancer	22	8	14	.....	17	5	.....	.....	6	16
Other General Diseases	12	9	3	9	2	1	.....	5	2	5
LOCAL DISEASES	212	112	100	110	65	34	3	101	19	92
Meningitis	10	5	5	5	5	.....	.....	4	.....	6
Apoplexy	13	6	7	2	6	5	.....	1	.....	12
Other Dis. of Brain & Membranes	2	.....	2	.....	1	1	.....	.....	.....	2
Paralysis	3	2	1	.....	3	.....	.....	.....	.....	3
Convulsions	4	4	.....	4	.....	.....	.....	4	.....	.....
Other Nervous Diseases	2	.....	2	1	.....	.....	1	1	.....	1
Organic Heart Diseases	28	15	13	8	11	9	.....	8	5	15
Other Dis. of Circulatory System	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bronchitis	32	17	15	21	5	6	.....	20	2	10
Pneumonia	31	15	16	20	9	1	1	20	2	9
Broncho-Pneumonia	17	12	5	16	.....	1	.....	15	.....	2
Asthma	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pleurisy	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Respiratory Diseases	5	5	.....	3	2	.....	.....	2	1	2
Gastritis	4	4	.....	1	3	.....	.....	1	.....	3
Diarrhoeal Diseases	9	4	5	9	.....	.....	.....	8	1	.....
Appendicitis and Peritonitis	8	3	5	4	4	.....	.....	3	1	4
Hernia and Intestinal Obstruction	6	3	3	3	3	.....	.....	3	.....	3
Cirrhosis of Liver	1	1	.....	.....	.....	1	.....	.....	.....	1
Other Digestive Diseases	2	1	1	.....	1	1	.....	.....	.....	2
Nephritis	7	4	3	1	4	2	.....	.....	3	4
Other Urinary Diseases	2	2	.....	.....	1	1	.....	.....	.....	2
Dis. of Female Generative System	2	.....	2	.....	2	.....	.....	.....	1	1
Puerperal Septicaemia	2	.....	2	.....	2	.....	.....	.....	1	1
Other Diseases of Pregnancy	1	.....	1	.....	1	.....	.....	.....	1	.....
Dis. of Skin and Cellular Tissue	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Locomotor System	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Malformations	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Congenital Debility	11	5	6	11	.....	.....	.....	11	.....	.....
Senile Debility	10	4	6	1	2	6	1	.....	1	9
VIOLENCE	15	12	3	10	3	2	.....	7	2	6
Suicides	3	2	1	3	.....	.....	.....	2	.....	1
Accidents	12	10	2	7	3	2	.....	5	2	5
Homicides	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Causes and Ill-Defined	2	2	.....	1	1	.....	.....	1	.....	1

Social Condition, Nativity and Age, for May, 1902.

AGE.																							
Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	90 to 95.	95 to 100.
77	14	6	6	4	9	7	15	11	4	12	9	15	15	20	10	12	17	15	15	10	5	1	...
11	4	2	2	1	4	2	6	1	....	5	7	2	5	11	5	5	2	3	1	1	...	...	...
..	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
4	3	1	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
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..	....	....	....	....	....	....	6	....	....	3	5	1	3	3	1	1	...	1	...	...	...	...	...
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3	1	....	....	1	....	....	....	....	....	1	1	...	...	1	1	1	1	1	...	...	...	...	...
65	10	3	4	3	2	4	6	9	4	6	2	11	9	9	5	6	14	12	13	9	5	1	...
..	2	1	....	....	....	2	....	....	1	....	....	3	...	1	...	....	....	....	....	....	....	....	...
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19	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....	1	1	3	4	1	1	...	...
11	2	1	1	2	1	....	....	1	....	2	1	2	3	1	1	1	...	....	....	....	1	...	...
8	4	....	1	1	....	1	....	....	1	....	....	....	....	....	....	....	....	1	....	....	....	....	...
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6	....	1	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	...
1	....	....	....	....	....	....	2	1	1	1	....	1	....	....	....	....	1	....	....	....	....	....	...
2	1	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....	....	1	....	....	....	....	...
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1	....	1	....	....	3	1	3	....	....	1	....	1	1	....	....	1	1	....	1	....	....	....	...
..	....	....	....	....	....	....	2	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	...
1	....	1	....	....	3	1	1	....	....	1	....	....	1	....	....	1	1	....	1	....	....	....	...
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TABLE No. 7—Deaths According to Cause, Sex,

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.				Nativity.		
		Male.	Female.	Single.	Married.	Widowed.	Divorced.	Milwaukee.	U. S. other than Mil.	Foreign.
TOTAL—All Causes	294	158	136	147	102	41	4	133	36	125
GENERAL DISEASES	82	39	43	41	31	9	1	41	9	32
Typhoid Fever	1	1	.....	1	.....	.....	.....	1	.....	.....
Measles	9	3	6	9	.....	.....	.....	9	.....	.....
Scarlet Fever	2	2	.....	2	.....	.....	.....	2	.....	.....
Whooping Cough	4	4	.....	4	.....	.....	.....	4	.....	.....
Diphtheria and Memb. Croup	5	3	2	5	.....	.....	.....	4	1	.....
Other Epidemic Diseases	1	.....	1	1	.....	.....	.....	1	.....	.....
Pulmonary Tuberculosis	27	12	15	15	11	1	.....	13	3	11
Other Tubercular Diseases	4	1	3	2	1	.....	1	3	.....	1
Cancer	19	8	11	.....	11	8	.....	1	5	13
Other General Diseases	10	5	5	2	8	.....	.....	3	.....	7
LOCAL DISEASES	191	101	90	98	61	29	3	87	22	82
Meningitis	9	6	3	8	1	.....	.....	6	2	1
Apoplexy	12	4	8	.....	5	7	.....	1	.....	11
Other Dis. of Brain & Membranes	4	3	1	1	2	.....	1	.....	3	1
Paralysis	1	1	.....	.....	1	.....	.....	.....	.....	1
Convulsions	7	4	3	6	1	.....	.....	7	.....	.....
Other Nervous Diseases	1	1	.....	.....	1	.....	.....	.....	.....	1
Organic Heart Diseases	28	16	12	5	10	13	.....	2	4	22
Other Dis. of Circulatory System	1	1	.....	.....	.....	1	.....	.....	1	.....
Bronchitis	13	7	6	7	3	3	.....	6	1	6
Pneumonia	21	12	9	10	8	3	.....	7	4	10
Broncho-Pneumonia	4	3	1	4	.....	.....	.....	4	.....	.....
Asthma	1	1	.....	.....	1	.....	.....	.....	.....	1
Pleurisy	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Respiratory Diseases	5	5	.....	4	1	.....	.....	4	.....	1
Gastritis	9	5	4	7	.....	1	1	6	1	2
Diarrhoeal Diseases	10	5	5	10	.....	.....	.....	10	.....	.....
Appendicitis and Peritonitis	2	.....	2	2	.....	.....	.....	1	.....	1
Hernia and Intestinal Obstruction	2	1	1	.....	2	.....	.....	.....	1	1
Cirrhosis of Liver	4	3	1	.....	3	.....	1	1	.....	3
Other Digestive Diseases	2	1	1	2	.....	.....	.....	1	.....	1
Nephritis	16	8	8	8	8	.....	.....	6	1	9
Other Urinary Diseases	2	1	1	1	1	.....	.....	1	.....	1
Dis. of Female Generative System	1	.....	1	.....	1	.....	.....	.....	.....	1
Puerperal Septicaemia	2	.....	2	.....	2	.....	.....	1	1	.....
Other Diseases of Pregnancy	6	.....	6	.....	6	.....	.....	.....	3	3
Dis. of Skin and Cellular Tissue	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Locomotor System	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Malformations	3	3	.....	3	.....	.....	.....	3	.....	.....
Congenital Debility	20	7	13	20	.....	.....	.....	20	.....	.....
Senile Debility	5	3	2	.....	4	1	.....	.....	.....	5
VIOLENCE	21	18	3	8	10	3	.....	5	5	11
Suicides	4	3	1	2	1	1	.....	1	.....	3
Accidents	17	15	2	6	9	2	.....	4	5	8
Homicides	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Causes and Ill-Defined	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Social Condition, Nativity and Age for June, 1902.

AGE.																						
Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	90 to 95.	95 to 100.
73	15	5	5	4	9	4	8	11	9	14	11	16	10	12	14	18	17	15	12	8	4	...	...
8	5	3	2	2	3	2	5	4	6	5	5	5	5	4	3	4	7	1	1	1	1	...	...
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2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	1	1	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
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..	1	..	..	..	..	..	..	..	..	1	..	1	1	2	..	2	1	..	1	..	..	..	..
64	10	2	3	2	5	2	1	6	2	9	5	6	4	4	9	14	8	14	11	7	3	..	..
4	..	..	2	..	1	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..
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4	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	2	2	..	..	..	..
7	2	..	..	..	..	..	1	..	..	1	1	..	1	1	1	2	..	1	1	1	1	..	..
2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
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TABLE No. 8—Deaths According to Cause, Sex,

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition				Nativity.		
		Male.	Female.	Single.	Married.	Widowed.	Divorced.	Milwaukee.	U. S. other than Mil.	Foreign.
TOTAL—All Causes	314	178	136	190	85	37	2	183	30	101
GENERAL DISEASES	83	40	43	42	32	9	.....	37	15	31
Typhoid Fever	3	1	2	2	1	.....	.....	.....	1	2
Measles	4	3	1	4	.....	.....	.....	4	.....	....
Scarlet Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Whooping Cough	8	4	4	8	.....	.....	.....	8	.....	.....
Diphtheria and Memb. Croup	4	2	2	4	.....	.....	.....	3	1	.....
Other Epidemic Diseases	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pulmonary Tuberculosis	27	13	14	15	11	1	.....	15	5	7
Other Tubercular Diseases	10	5	5	7	2	1	.....	7	2	1
Cancer	19	9	10	2	13	4	.....	.....	4	15
Other General Diseases	8	3	5	.....	5	3	.....	.....	2	6
LOCAL DISEASES	203	113	90	137	42	24	.....	137	12	54
Meningitis	13	4	9	10	3	.....	.....	11	.....	2
Apoplexy	8	3	5	.....	3	5	.....	.....	1	7
Other Dis. of Brain & Membranes	1	.....	1	.....	1	.....	.....	.....	.....	1
Paralysis	1	.....	1	.....	.....	1	.....	.....	.....	1
Convulsions	5	2	3	5	.....	.....	.....	5	.....	.....
Other Nervous Diseases	2	1	1	.....	2	.....	.....	.....	.....	2
Organic Heart Diseases	18	13	5	5	10	3	.....	6	1	11
Other Dis. of Circulatory System	1	.....	1	1	.....	.....	.....	1	.....	.....
Bronchitis	10	4	6	6	.....	4	.....	6	.....	4
Pneumonia	9	5	4	6	2	1	.....	5	1	3
Broncho-Pneumonia	5	3	2	5	.....	.....	.....	5	.....	.....
Asthma	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pleurisy	2	2	.....	1	.....	1	.....	1	.....	1
Other Respiratory Diseases	2	1	1	.....	1	1	.....	.....	.....	2
Gastritis	4	3	1	2	2	.....	.....	2	.....	2
Diarrhoeal Diseases	58	38	20	58	.....	.....	.....	56	1	1
Appendicitis and Peritonitis	6	4	2	4	2	.....	.....	3	.....	3
Hernia and Intestinal Obstruction	3	1	2	2	1	.....	.....	1	2	.....
Cirrhosis of Liver	2	2	.....	1	1	.....	.....	1	.....	1
Other Digestive Diseases	2	1	1	1	1	.....	.....	1	.....	1
Nephritis	11	7	4	5	4	2	.....	5	1	5
Other Urinary Diseases	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dis. of Female Generative System	3	.....	3	.....	3	.....	.....	1	2	.....
Puerperal Septicaemia	1	.....	1	.....	1	.....	.....	.....	1	.....
Other Diseases of Pregnancy	4	.....	4	.....	4	.....	.....	2	1	1
Dis. of Skin and Cellular Tissue	1	1	.....	.....	.....	1	.....	.....	.....	1
Locomotor System	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Malformations	2	2	.....	2	.....	.....	.....	2	.....	....
Congenital Debility	23	14	9	23	.....	.....	.....	23	.....	.....
Senile Debility	6	2	4	.....	1	5	.....	.....	1	5
VIOLENCE	28	25	3	11	11	4	2	9	3	16
Suicides	7	6	1	.....	5	1	1	1	.....	6
Accidents	21	19	2	11	6	3	1	8	3	10
Homicides	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Causes and Ill-Defined	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Social Condition, Nativity and Age, for July, 1902.

AGE.																							
1 year. Under	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	90 to 95.	95 to 100.
98	18	11	5	4	13	2	9	14	20	9	10	11	7	12	13	16	9	11	8	7	5	1	1
6	3	4	2	3	6	....	4	8	4	3	4	7	1	6	7	7	3	3	1	1	...	...	...
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1	1	2	....	....	....	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
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5	1	....	1	1	....	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
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..	....	....	....	....	2	....	3	7	2	3	2	3	1	1	2	...	1	...	...	...	...	...	...
..	1	1	1	1	2	....	1	....	....	....	1	...	...	1	...	1	...	...	...	...	...	...	...
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92	15	7	2	....	5	1	5	5	10	4	4	2	4	6	4	7	6	8	5	5	5	1	...
3	1	2	....	....	1	1	1	1	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...
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3	3	....	....	....	....	....	....	....	....	....	....	...	...	...	...	...	...	...	1	1	2	...	...
3	....	1	1	....	....	....	1	....	....	....	....	1	...	...	1	...	...	...	...	...	1	...	...
4	1	....	....	....	....	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
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2	....	....	....	....	....	....	....	....	....	....	1	...	...	...	...	...	1	...	...	...	...	...	...
46	7	4	1	....	....	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
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1	....	....	....	....	....	....	1	....	....	....	....	...	...	1	...	...	...	...	...	...	...	...	...
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..	1	....	....	....	....	....	....	....	....	....	....	...	...	...	...	...	...	...	1	...	...	...	...
..	1	....	....	....	1	....	....	1	2	....	....	...	1	2	...	...	...	1	...	...	2	...	...
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2	....	....	....	....	....	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
23	....	....	....	....	....	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
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..	....	....	1	1	2	1	....	1	6	2	2	2	2	...	2	2	...	...	2	1	...	...	1
..	....	....	....	....	....	....	....	....	2	....	....	...	1	...	2	1	...	...	1	...	...	...	...
..	....	....	1	1	2	1	....	1	4	2	2	2	1	...	...	1	...	...	1	1	...	...	1
..	....	....	....	....	....	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
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TABLE No. 9—Deaths According to Cause, Sex,

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.				Nativity.		
		Male.	Female.	Single.	Married.	Widowed.	Divorced.	Milwaukee.	U. S. other than Mil.	Foreign.
TOTAL—All Causes	384	203	181	226	116	40	2	202	44	138
GENERAL DISEASES	97	46	51	45	46	6	.....	39	12	46
Typhoid Fever	8	6	2	4	4	.....	.....	3	4	1
Measles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Scarlet Fever	1	.....	1	1	.....	.....	.....	1	.....	.....
Whooping Cough	10	3	7	10	.....	.....	.....	10	.....	.....
Diphtheria and Memb. Croup	3	1	2	3	.....	.....	.....	1	1	1
Other Epidemic Diseases	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pulmonary Tuberculosis	27	14	13	9	17	1	.....	7	3	17
Other Tubercular Diseases	14	9	5	9	5	.....	.....	9	1	4
Cancer	24	8	16	3	16	5	.....	2	3	19
Other General Diseases	10	5	5	6	4	.....	.....	6	.....	4
LOCAL DISEASES	262	136	126	168	61	31	2	155	24	83
Meningitis	6	1	5	5	1	.....	.....	5	.....	1
Apoplexy	11	5	6	.....	7	4	.....	.....	1	10
Other Dis. of Brain & Membranes	1	.....	1	.....	1	.....	.....	.....	.....	1
Paralysis	3	3	.....	1	2	.....	.....	1	.....	2
Convulsions	10	7	3	10	.....	.....	.....	10	.....	.....
Other Nervous Diseases	1	.....	1	.....	.....	1	.....	.....	.....	1
Organic Heart Diseases	21	16	5	5	11	5	.....	4	1	16
Other Dis. of Circulatory System	9	6	3	1	6	1	1	1	2	6
Bronchitis	6	2	4	3	1	2	.....	2	1	3
Pneumonia	21	12	9	13	4	4	.....	12	2	7
Broncho-Pneumonia	4	3	1	4	.....	.....	.....	4	.....	.....
Asthma	1	.....	1	.....	.....	1	.....	.....	.....	1
Pleurisy	2	1	1	1	1	.....	.....	1	.....	1
Other Respiratory Diseases	2	2	.....	1	1	.....	.....	1	1	.....
Gastritis	5	4	1	1	3	1	.....	1	1	3
Diarrhoeal Diseases	96	49	47	92	2	2	.....	81	10	5
Appendicitis and Peritonitis	6	3	3	4	2	.....	.....	5	.....	1
Hernia and Intestinal Obstruction	4	.....	4	2	1	1	.....	2	.....	2
Cirrhosis of Liver	3	1	2	.....	3	.....	.....	.....	.....	3
Other Digestive Diseases	4	4	.....	3	1	.....	.....	2	1	1
Nephritis	12	7	5	1	6	4	1	2	2	8
Other Urinary Diseases	2	1	1	.....	2	.....	.....	.....	.....	2
Dis. of Female Generative System	1	.....	1	1	.....	.....	.....	.....	.....	1
Puerperal Septicaemia	1	.....	1	.....	1	.....	.....	1	.....	.....
Other Diseases of Pregnancy	3	.....	3	.....	3	.....	.....	.....	1	2
Dis. of Skin and Cellular Tissue	2	.....	2	2	.....	.....	.....	2	.....	.....
Locomotor System	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Malformations	1	.....	1	1	.....	.....	.....	1	.....	.....
Congenital Debility	17	8	9	17	.....	.....	.....	17	.....	.....
Senile Debility	7	1	6	.....	2	5	.....	.....	1	6
VIOLENCE	25	21	4	13	9	3	.....	8	8	9
Suicides	5	4	1	2	2	1	.....	2	2	1
Accidents	20	17	3	11	7	2	.....	6	6	8
Homicides	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Causes and Ill-Defined	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Social Condition, Nativity and Age for August, 1902.

AGE.																							
Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	90 to 95.	95 to 100.
111	31	11	6	4	12	11	10	12	12	18	19	12	13	10	12	20	15	13	17	5	7	2	1
9	6	1	1	1	4	2	4	9	8	8	9	6	6	2	5	6	3	5	...	2	...	...	...
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5	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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...	...	...	...	...	...	...	2	6	3	4	2	3	3	...	1	2	...	1	...	...	...	...	...
1	...	...	...	1	2	1	...	...	3	2	2	...	1	...	1	...	...	...	...	...	...	...	...
...	...	...	...	...	...	1	...	...	...	1	3	2	1	2	3	4	3	2	...	2	...	...	...
3	...	...	...	...	1	...	1	...	1	...	1	...	1	...	...	...	...	2	...	...	...	...	...
102	24	10	5	1	7	7	2	2	3	8	7	4	6	7	7	11	12	7	17	3	7	2	1
1	...	2	...	...	1	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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7	1	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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...	...	...	...	...	2	1	1	...	...	...	1	1	1	3	1	1	1	2	3	1	2	...	...
...	...	...	...	...	...	1	...	...	1	1	1	...	...	1	2	...	1	...	...	...	1	...	...
2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	1	...	...	...	...
7	3	...	...	1	...	1	...	...	...	1	1	...	...	...	1	...	3	...	1	1	1	...	...
2	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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63	17	7	2	...	2	1	...	...	...	...	...	...	...	...	...	1	...	1	2	...	...	...	...
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1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	...	...	...	...
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2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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16	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
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...	1	...	...	2	1	2	4	1	1	2	3	2	1	1	...	3	...	1	...	...	...	...	...
...	...	...	...	...	...	...	1	...	...	1	3	...	...	...	...	...	...	...	...	...	...	...	...
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TABLE No. 10—Deaths According to Cause, Sex,

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.				Nativity.		
		Male.	Female.	Single.	Married.	Widowed.	Divorced.	Milwaukee.	U. S. other than Mil.	Foreign.
TOTAL—All Causes	330	191	139	185	98	43	4	175	53	102
GENERAL DISEASES	70	34	36	32	29	8	1	30	17	23
Typhoid Fever	5	3	2	3	2	.....	.....	3	2	.....
Measles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Scarlet Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Whooping Cough	8	4	4	8	.....	.....	.....	8	.....	.....
Diphtheria & Membranous Croup	6	4	2	6	.....	.....	.....	5	1	.....
Other Epidemic Diseases	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pulmonary Tuberculosis	16	9	7	6	10	.....	.....	9	2	5
Other Tubercular Diseases	6	4	2	4	2	.....	.....	2	2	2
Cancer	21	7	14	2	12	6	1	1	6	14
Other General Diseases	8	3	5	3	3	2	.....	2	4	2
LOCAL DISEASES	230	133	97	139	56	32	3	132	30	68
Meningitis	4	3	1	3	.....	.....	1	3	1	.....
Apoplexy	11	8	3	2	6	3	.....	3	1	7
Other Dis. of Brain & Membranes	1	1	.....	.....	1	.....	.....	.....	.....	1
Paralysis	1	1	.....	1	.....	.....	.....	1	.....	.....
Convulsions	5	4	1	5	.....	.....	.....	4	1	.....
Other Nervous Diseases	3	2	1	.....	2	1	.....	.....	1	2
Organic Heart Diseases	15	8	7	.....	9	6	.....	.....	6	9
Other Dis. of Circulatory System.	4	1	3	.....	2	2	.....	.....	.....	4
Bronchitis	9	7	2	7	2	.....	.....	5	2	2
Pneumonia	9	7	2	3	3	2	1	4	1	4
Broncho-Pneumonia	3	2	1	3	.....	.....	.....	3	.....	.....
Asthma	3	1	2	.....	1	2	.....	.....	1	2
Pleurisy	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Respiratory Diseases	9	6	3	4	4	1	.....	3	2	4
Gastritis	4	2	2	4	.....	.....	.....	4	.....	.....
Diarrhoeal Diseases	75	43	32	68	4	3	.....	66	3	6
Appendicitis and Peritonitis	7	7	.....	3	4	.....	.....	2	4	1
Hernia and Intestinal Obstruction	2	1	1	.....	.....	1	1	.....	1	1
Cirrhosis of Liver	2	2	.....	1	1	.....	.....	.....	1	1
Other Digestive Diseases	4	2	2	2	1	1	.....	2	.....	2
Nephritis	17	9	8	4	9	4	.....	1	2	14
Other Urinary Diseases	1	.....	1	.....	1	.....	.....	.....	1	.....
Dis. of Female Generative System	1	.....	1	.....	1	.....	.....	.....	1	.....
Puerperal Septicaemia	1	.....	1	.....	1	.....	.....	.....	.....	1
Other Diseases of Pregnancy	3	.....	3	.....	3	.....	.....	2	.....	1
Dis. of Skin and Cellular Tissue	1	.....	1	1	.....	.....	.....	1	.....	.....
Locomotor System	1	.....	1	.....	.....	1	.....	.....	.....	1
Malformations	3	1	2	3	.....	.....	.....	3	.....	.....
Congenital Debility	25	11	14	25	.....	.....	.....	25	.....	.....
Senile Debility	6	4	2	.....	1	5	.....	.....	1	5
VIOLENCE	30	24	6	14	13	3	.....	13	6	11
Suicides	9	7	2	4	5	.....	.....	3	4	2
Accidents	20	16	4	9	8	3	.....	9	2	9
Homicides	1	1	.....	1	.....	.....	.....	1	.....	.....
Other Causes and Ill-Defined	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Social Condition, Nativity and Age for September, 1902.

AGE.																						
Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	90 to 95.	95 to 100.
88	30	9	8	3	7	5	7	12	16	12	13	11	14	14	13	15	20	10	9	7	5	2	...
3	6	2	4	....	2	1	3	6	8	3	1	5	2	6	7	5	4	1	...	...	...	1	...
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84	23	7	3	3	3	3	2	3	4	8	10	4	10	6	5	9	14	8	9	6	5	1	...
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2	2	....	....	....	....	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
43	17	6	1	....	1	....	....	....	....	....	....	...	2	...	...	1	2	1	...	...	...	1	...
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1	1	....	1	....	2	1	2	3	4	1	2	2	2	2	1	1	2	1	...	1	...	...	...
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1	1	....	1	....	2	1	1	2	2	....	1	1	2	...	1	1	1	1	...	1	...	...	...
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TABLE No. 11—Deaths According to Cause, Sex,

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.				Nativity.		
		Male.	Female.	Single.	Married.	Widowed.	Divorced.	Milwaukee.	U. S. other than Mil.	Foreign.
TOTAL—All Causes	267	138	129	123	99	44	1	113	48	106
GENERAL DISEASES	64	21	43	27	28	9	.....	21	15	28
Typhoid Fever	8	4	4	4	4	.....	.....	2	2	4
Measles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Scarlet Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Whooping Cough	2	.....	2	2	.....	.....	.....	2	.....	.....
Diphtheria and Memb. Croup	6	3	3	6	.....	.....	.....	5	1	.....
Other Epidemic Diseases	3	2	1	1	1	1	.....	.....	.....	3
Pulmonary Tuberculosis	22	7	15	7	12	3	.....	5	7	10
Other Tubercular Diseases	3	2	1	2	1	.....	.....	2	1	.....
Cancer	13	2	11	2	7	4	.....	1	3	9
Other General Diseases	17	1	6	3	3	1	.....	4	1	2
LOCAL DISEASES	181	102	79	84	65	31	1	83	31	67
Meningitis	5	1	4	3	1	1	.....	3	1	1
Apoplexy	9	6	3	2	6	1	.....	1	2	6
Other Dis. of Brain & Membranes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Paralysis	1	.....	1	.....	.....	1	.....	.....	.....	1
Convulsions	2	2	.....	2	.....	.....	.....	2	.....	.....
Other Nervous Diseases	3	1	2	1	1	1	.....	1	.....	2
Organic Heart Diseases	23	10	13	3	11	8	1	3	7	13
Other Dis. of Circulatory System	4	1	3	.....	2	2	.....	.....	.....	4
Bronchitis	13	10	3	6	5	2	.....	5	4	4
Pneumonia	16	11	5	3	12	1	.....	2	4	10
Broncho-Pneumonia	3	1	2	2	1	.....	.....	2	.....	1
Asthma	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pleurisy	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Respiratory Diseases	2	.....	2	.....	2	.....	.....	2	.....	.....
Gastritis	4	1	3	4	.....	.....	.....	4	.....	.....
Diarrhoeal Diseases	24	19	5	20	3	1	.....	18	1	5
Appendicitis and Peritonitis	1	.....	1	1	.....	.....	.....	.....	1	.....
Hernia and Intestinal Obstruction	2	1	1	2	.....	.....	.....	2	.....	.....
Cirrhosis of Liver	5	2	3	1	3	1	.....	2	.....	3
Other Digestive Diseases	3	1	2	1	1	1	.....	.....	3	.....
Nephritis	16	11	5	.....	11	5	.....	2	4	10
Other Urinary Diseases	3	3	.....	.....	3	.....	.....	.....	2	1
Dis. of Female Generative System	1	.....	1	.....	1	.....	.....	.....	.....	1
Puerperal Septicaemia	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Diseases of Pregnancy	1	.....	1	.....	1	.....	.....	1	.....	.....
Dis. of Skin and Cellular Tissue	1	1	.....	.....	.....	1	.....	.....	.....	1
Locomotor System	1	1	.....	1	.....	.....	.....	1	.....	.....
Malformations	2	1	1	2	.....	.....	.....	2	.....	.....
Congenital Debility	30	16	14	30	.....	.....	.....	30	.....	.....
Senile Debility	6	2	4	.....	1	5	.....	.....	2	4
VIOLENCE	22	15	7	12	6	4	.....	9	2	11
Suicides	7	4	3	4	1	2	.....	4	.....	3
Accidents	15	11	4	8	5	2	.....	5	2	8
Homicides	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Causes and Ill-Defined	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Social Condition, Nativity and Age for October, 1902.

AGE.																							
Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	90 to 95.	95 to 100.
61	10	4	1	....	10	1	9	11	11	10	14	13	15	12	16	12	19	12	12	10	1	2	1
2	1	2	....	....	6	....	4	7	4	7	3	6	5	2	5	3	2	2	2	1	....	....	....
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58	9	2	1	....	2	....	3	1	5	3	9	5	9	9	9	8	16	10	9	9	1	2	1
1	1	....	....	....	1	....	....	....	....	....	....	....	1	....	1	....	....	....	....	....	....	....	....
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4	1	....	....	....	....	....	....	....	....	....	....	....	1	1	1	....	1	1	1	2	....	....	....
1	....	....	....	....	....	....	....	....	1	....	4	1	....	4	....	1	3	....	....	1	....	....	....
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TABLE No. 12—Deaths According to Cause, Sex,

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.				Nativity.		
		Male.	Female.	Single.	Married.	Widowed.	Divorced.	Milwaukee.	U. S. other than Mil.	Foreign.
TOTAL—All Causes	297	176	121	143	105	45	4	121	64	112
GENERAL DISEASES	91	52	39	51	34	5	1	44	21	26
Typhoid Fever	7	3	4	4	3	.....	.....	1	4	2
Measles	2	2	.....	2	.....	.....	.....	.....	1	1
Scarlet Fever	1	.....	1	1	.....	.....	.....	1	.....	.....
Whooping Cough	4	.....	4	4	.....	.....	.....	3	1	.....
Diphtheria and Memb. Croup	13	7	6	13	.....	.....	.....	11	2	.....
Other Epidemic Diseases	2	.....	2	1	.....	1	.....	1	1	.....
Pulmonary Tuberculosis	31	18	13	16	13	2	.....	18	5	8
Other Tubercular Diseases	5	3	2	3	2	.....	.....	3	2	.....
Cancer	14	12	2	3	10	1	.....	2	2	10
Other General Diseases	12	7	5	4	6	1	1	4	3	5
LOCAL DISEASES	182	101	81	86	56	38	2	72	34	76
Meningitis	7	5	2	7	.....	.....	.....	4	3	.....
Apoplexy	18	9	9	2	6	10	.....	1	3	14
Other Dis. of Brain & Membranes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Paralysis	3	1	2	.....	1	2	.....	.....	1	2
Convulsions	7	4	3	7	.....	.....	.....	7	.....	.....
Other Nervous Diseases	3	1	2	1	2	.....	.....	1	2	.....
Organic Heart Diseases	21	16	5	6	10	4	1	3	4	14
Other Dis. of Circulatory System	6	2	4	.....	2	4	.....	.....	1	5
Bronchitis	13	8	5	10	.....	3	.....	10	1	2
Pneumonia	19	8	11	12	3	3	1	10	3	6
Broncho-Pneumonia	4	3	1	4	.....	.....	.....	2	2	.....
Asthma	2	2	.....	.....	2	.....	.....	.....	1	1
Pleurisy	1	.....	1	.....	.....	1	.....	.....	.....	1
Other Respiratory Diseases	3	2	1	1	2	.....	.....	.....	.....	3
Gastritis	2	2	.....	2	.....	.....	.....	1	1	.....
Diarrhoeal Diseases	10	7	3	10	.....	.....	.....	9	.....	1
Appendicitis	8	4	4	5	2	1	.....	4	3	1
Hernia and Intestinal Obstruction	1	1	.....	.....	1	.....	.....	.....	.....	1
Cirrhosis of Liver	6	5	1	.....	4	2	.....	1	1	4
Other Digestive Diseases	4	3	1	.....	3	1	.....	.....	.....	4
Nephritis	9	2	7	1	5	3	.....	.....	3	6
Other Urinary Diseases	2	2	.....	.....	2	.....	.....	.....	1	1
Dis. of Female Generative System	1	.....	1	.....	1	.....	.....	.....	1	.....
Puerperal Septicaemia	4	.....	4	.....	4	.....	.....	1	1	2
Other Diseases of Pregnancy	1	.....	1	.....	1	.....	.....	.....	1	.....
Dis. of Skin and Cellular Tissue	3	1	2	1	2	.....	.....	1	.....	2
Locomotor System	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Malformations	1	1	.....	1	.....	.....	.....	1	.....	.....
Congenital Debility	16	9	7	16	.....	.....	.....	16	.....	.....
Senile Debility	7	3	4	.....	3	4	.....	.....	1	6
VIOLENCE	24	23	1	6	15	2	1	5	9	10
Suicides	9	9	.....	3	4	1	1	2	3	4
Accidents	14	13	1	2	11	1	.....	3	5	6
Homicides	1	1	.....	1	.....	.....	.....	.....	1	.....
Other Causes and Ill-Defined	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Social Condition, Nativity and Age for November, 1902.

AGE.																							
Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	90 to 95.	95 to 100.
54	13	9	4	2	14	10	6	14	16	16	17	18	12	11	13	11	14	12	10	15	4	2	...
7	2	5	4	1	7	5	4	9	8	5	7	7	6	3	5	1	4	...	1	...	...	...	...
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3	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	...	2	4	1	4	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...
2	...	...	...	...	...	1	2	7	3	4	4	2	2	1	2	...	1	...	...	...	...	...	...
...	...	...	...	...	1	1	1	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
1	...	...	...	...	...	...	...	...	1	...	1	2	3	1	2	1	2	...	...	...	...	...	...
...	...	...	...	...	2	...	1	1	2	...	1	3	...	1	1	...	...	...	...	...	...	...	...
46	11	4	...	1	7	5	1	2	8	8	6	9	4	7	6	7	9	12	9	14	4	2	...
1	3	...	...	...	1	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	...	...	...	...	...	...	...	...	...	1	1	1	1	...	1	2	...	4	2	2	1	1	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	1	...
6	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...
...	...	...	...	...	...	2	...	...	1	1	1	1	...	2	2	1	3	3	...	4	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	1	...	2	...	...	...
8	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	1	...	...
2	3	2	...	...	3	1	...	...	2	...	1	...	...	...	...	...	...	2	2	1	...	...	...
...	1	1	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	1	...	1	...	...	1	...	...	...	...	...	...	...	...	...
1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
1	...	...	...	...	2	1	...	...	1	...	1	1	...	1	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	1	...	...	1	...	1	...	1	1	...	1	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1	...	1	...	...	...	...
...	...	...	...	...	...	...	...	...	...	1	1	2	1	...	1	1	1	...	1	...	...	...	...
...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	1	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	1	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	4	2	...	...
1	...	...	...	...	...	...	1	3	...	3	4	2	2	1	2	3	1	...	...	1	...	...	...
...	...	...	...	...	...	...	...	1	...	2	3	1	...	...	1	...	...	...	...	1	...	...	...
1	...	...	...	...	...	...	1	1	...	1	1	1	2	1	1	3	1	...	...	...	...	...	...
...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE No. 13—Deaths According to Cause, Sex,

CAUSE OF DEATH.	Total Deaths.	Sex.		Social Condition.				Nativity.		
		Male.	Female.	Single.	Married.	Widowed.	Divorced.	Milwaukee.	U. S. other than Mil.	Foreign.
TOTAL—All Causes	362	204	158	193	115	53	1	178	51	131
GENERAL DISEASES	99	57	42	45	47	6	1	44	14	41
Typhoid Fever	5	4	1	2	3	.....	.....	2	.....	3
Measles	1	.....	1	1	.....	.....	.....	1	.....	.....
Scarlet Fever	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Whooping Cough	7	5	2	7	.....	.....	.....	6	.....	1
Diphtheria and Memb. Croup	13	5	8	12	1	.....	.....	11	2	.....
Other Epidemic Diseases	3	1	2	1	1	1	.....	1	.....	2
Pulmonary Tuberculosis	39	20	19	14	22	2	1	17	7	15
Other Tubercular Diseases	6	4	2	4	2	.....	.....	3	.....	3
Cancer	15	10	5	.....	13	2	.....	1	1	13
Other General Diseases	10	8	2	4	5	1	.....	2	4	4
LOCAL DISEASES	237	124	113	137	55	45	.....	129	31	77
Meningitis	7	5	2	7	.....	.....	.....	7	.....	.....
Apoplexy	13	4	9	2	4	7	.....	3	4	6
Other Dis. of Brain & Membranes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Paralysis	1	1	.....	.....	1	.....	.....	.....	.....	1
Convulsions	14	9	5	14	.....	.....	.....	14	.....	.....
Other Nervous Diseases	3	1	2	1	.....	2	.....	1	1	1
Organic Heart Diseases	19	9	10	4	9	6	.....	1	2	16
Other Dis. of Circulatory System	2	1	1	.....	2	.....	.....	.....	1	1
Bronchitis	33	19	14	22	7	4	.....	22	1	10
Pneumonia	29	14	15	14	9	6	.....	13	6	10
Broncho-Pneumonia	16	9	7	12	3	1	.....	12	.....	4
Asthma	2	2	.....	.....	1	1	.....	.....	.....	2
Pleurisy	2	2	.....	1	.....	1	.....	1	.....	1
Other Respiratory Diseases	2	1	1	.....	.....	2	.....	.....	.....	2
Gastritis	8	7	1	5	1	2	.....	5	2	1
Diarrhoeal Diseases	23	9	14	20	1	2	.....	19	1	3
Appendicitis and Peritonitis	7	3	4	5	1	1	.....	4	2	1
Hernia and Intestinal Obstruction	3	2	1	1	1	1	.....	1	1	1
Cirrhosis of Liver	1	1	.....	.....	.....	1	.....	.....	.....	1
Other Digestive Diseases	3	1	2	1	1	.....	.....	1	.....	2
Nephritis	14	7	7	4	4	6	.....	3	6	5
Other Urinary Diseases	1	1	.....	.....	1	.....	.....	.....	.....	1
Dis. of Female Generative System	1	.....	1	1	.....	.....	.....	.....	.....	1
Puerperal Septicaemia	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other Diseases of Pregnancy	1	.....	1	.....	1	.....	.....	.....	1	.....
Dis. of Skin and Cellular Tissue	3	3	.....	1	2	.....	.....	1	1	1
Locomotor System	1	1	.....	1	.....	.....	.....	1	.....	.....
Malformations	2	1	1	2	.....	.....	.....	2	.....	.....
Congenital Debility	18	8	10	18	.....	.....	.....	18	.....	.....
Senile Debility	8	3	5	1	4	3	.....	.....	2	6
VIOLENCE	26	23	3	11	13	2	.....	5	6	15
Suicides	7	6	1	.....	6	1	.....	.....	1	6
Accidents	18	16	2	10	7	1	.....	5	4	9
Homicides	1	1	.....	1	.....	.....	.....	.....	1	.....
Other Causes and Ill-Defined	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Social Condition, Nativity and Age for December, 1902.

AGE.																							
Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	90 to 95.	95 to 100.
95	23	8	7	3	14	4	12	11	14	6	20	11	17	13	10	18	22	17	12	18	7	...	...
7	4	4	2	2	7	1	7	6	9	4	13	3	9	6	2	5	5	...	1	2	...	...	...
..	....	....	....	....	2	....	....	....	....	1	....	...	1	...	...	1	...	...	...	...	...	...	...
1	....	....	....	....	....	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
..	....	....	....	....	....	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
4	1	1	....	1	....	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
..	2	3	1	1	4	1	....	....	....	....	1	...	...	...	...	...	...	...	...	...	...	...	...
1	....	....	....	....	....	....	....	....	....	....	....	...	...	...	...	...	1	...	...	1	...	...	...
..	....	....	....	....	....	....	7	5	6	3	8	2	4	2	...	2	...	...	...	...	...	...	...
..	1	....	1	....	1	....	....	....	1	....	....	...	...	...	...	1	1	...	...	...	...	...	...
..	....	....	....	....	....	....	....	....	....	....	2	1	3	4	1	1	2	...	...	1	...	...	...
1	....	....	....	....	....	....	....	1	2	....	2	...	1	...	1	...	1	...	1	...	...	...	...
88	19	4	5	1	5	2	2	2	4	2	5	6	5	6	7	8	16	17	11	16	6	...	...
3	2	....	....	....	2	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
..	....	....	....	....	....	....	....	1	1	....	2	...	1	...	...	...	1	3	1	2	1	...	...
..	....	....	....	....	....	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
..	....	....	....	....	....	....	....	....	....	....	....	...	...	...	...	1	...	...	...	...	...	...	...
12	2	....	....	....	....	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
..	....	1	....	....	....	....	....	....	....	....	....	...	...	...	...	...	1	...	1	...	...	...	...
..	....	....	....	....	....	1	....	....	....	1	....	2	...	1	2	2	3	2	1	2	2	...	...
..	....	....	....	....	....	....	....	....	....	....	....	...	...	...	1	...	...	1	...	...	...	...	...
18	4	....	....	....	....	....	....	....	....	....	....	...	1	2	...	...	2	2	3	...	1	...	...
4	4	1	1	1	1	....	....	....	1	1	2	1	1	2	...	1	4	2	...	1	1	...	...
5	6	....	1	....	....	....	....	....	....	....	....	...	...	...	...	1	2	...	1	...	...	...	...
..	....	....	....	....	....	....	....	....	....	....	....	...	...	...	...	...	...	1	1	...	...	...	...
..	....	....	....	....	....	....	....	....	....	....	....	1	...	...	...	1	...	...	...	...	...	...	...
..	....	....	....	....	....	....	....	....	....	....	....	...	...	...	1	...	1	...	...	...	...	...	...
4	....	....	1	....	....	....	....	....	....	....	....	...	...	...	1	...	...	1	...	1	...	...	...
17	1	1	1	....	....	....	....	....	....	....	....	...	...	...	1	1	...	1	...	...	...	...	...
2	....	....	....	....	....	1	1	1	....	....	....	...	...	1	...	...	...	...	...	...	1	...	...
1	....	....	....	....	....	....	....	....	....	....	....	...	1	...	...	...	...	1	...	...	...	...	...
..	....	....	....	....	....	....	....	....	....	....	....	...	...	...	...	...	...	...	...	1	...	...	...
..	....	1	....	....	....	....	....	....	....	....	....	...	...	...	...	...	...	...	1	1	...	...	...
1	....	....	1	....	1	....	....	....	1	....	1	2	1	...	1	...	1	1	1	2	...	...	...
..	....	....	....	....	....	....	....	....	....	....	....	...	...	...	...	...	1	...	...	...	...	...	...
..	....	....	....	....	....	....	1	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
..	....	....	....	....	....	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
..	....	....	....	....	....	....	....	....	1	....	....	...	...	...	...	...	...	...	...	...	...	...	...
1	....	....	....	....	....	....	....	....	....	....	....	...	...	...	...	1	...	1	...	...	...	...	...
..	....	....	....	....	1	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
2	....	....	....	....	....	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
18	....	....	....	....	....	....	....	....	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
..	....	....	....	....	....	....	....	....	....	....	....	...	...	...	...	...	...	1	1	6	...	...	...
..	....	....	....	....	2	1	3	3	1	....	2	2	3	1	1	5	1	...	...	...	1	...	...
..	....	....	....	....	....	....	....	1	....	....	....	...	2	1	...	2	1	...	...	...	...	...	...
..	....	....	....	....	2	1	3	1	1	....	2	2	1	...	1	3	...	...	...	...	1	...	...
..	....	....	....	....	....	....	....	1	....	....	....	...	...	...	...	...	...	...	...	...	...	...	...
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TABLE No. 14—Showing by Wards the Estimated Population, Some of the More Important Causes, for the Year 1902.

WARDS.	Population.	Total Deaths.	Monthly Death Rate.	Deaths Under One Year of Age.	Deaths, One to Five Years of Age.
First	9,820	102	10.39	21	3
Second	10,270	111	10.81	25	4
Third	5,610	63	11.23	13	7
Fourth	11,050	104	9.41	12	4
Fifth	10,380	130	12.52	29	19
Sixth	14,180	145	10.22	25	9
Seventh	7,410	69	9.31	4	3
Eighth	10,970	131	11.94	22	12
Ninth	18,320	227	12.38	53	18
Tenth	17,640	183	10.36	36	14
Eleventh	22,740	277	12.19	106	41
Twelfth	13,710	153	11.08	61	9
Thirteenth	17,660	222	12.57	57	29
Fourteenth	21,460	332	15.49	145	63
Fifteenth	13,150	121	9.20	20	8
Sixteenth	10,160	96	9.45	11	5
Seventeenth	10,610	110	10.37	26	13
Eighteenth	14,430	173	11.99	56	24
Nineteenth	10,840	115	10.61	29	12
Twentieth	17,470	161	9.21	44	22
Twenty-first	12,630	155	12.27	51	24
Twenty-second	10,440	103	9.86	28	12
Twenty-third	9,050	106	11.71	28	13
Hospitals	.....	407	.....	61	22
Total	300,000	3,796	12.65	963	390

Total Deaths, Annual Death Rate, and the Number of Deaths from

CAUSE OF DEATH.															WARDS.
Typhoid Fever.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria.	Small Pox.	Tubercular Dis.	Cancer.	Nervous System.	Circulatory System.	Bronchitis.	Pneumonia.	Nephritis.	Diarrhoeal, Under Five Years.	Violence.	
2	1	....	....	1	....	8	7	8	16	5	8	6	2	9	First
....	....	1	2	....	....	10	9	11	17	....	10	5	3	7	Second
1	....	....	....	1	....	6	5	12	5	1	9	2	1	8	Third
....	....	1	....	3	....	19	9	8	10	3	6	6	4	7	Fourth
....	1	....	5	5	....	11	4	19	11	10	5	7	17	11	Fifth
....	....	1	2	1	....	20	9	17	17	6	7	9	6	11	Sixth
....	1	....	....	....	....	8	1	9	14	1	8	7	2	10	Seventh
....	....	....	1	1	....	19	7	18	12	10	7	6	17	6	Eighth
3	4	1	6	2	....	25	12	33	19	15	22	11	15	11	Ninth
1	1	1	2	6	....	27	15	17	17	12	12	5	10	9	Tenth
4	3	1	8	8	....	37	9	35	18	19	16	3	32	13	Eleventh
4	1	1	2	2	....	15	7	16	8	17	8	5	21	9	Twelfth
1	6	1	2	10	....	33	14	21	14	10	19	7	16	7	Thirteenth
2	3	....	3	8	....	17	7	26	18	31	30	5	61	4	Fourteenth
3	1	....	4	1	....	11	12	14	14	7	10	6	6	8	Fifteenth
....	....	....	....	3	....	4	8	11	14	8	2	6	5	8	Sixteenth
4	....	....	1	2	....	14	5	14	9	7	6	10	10	9	Seventeenth
3	4	....	2	4	....	13	8	24	15	4	14	6	20	13	Eighteenth
3	....	....	....	1	....	18	4	12	6	6	15	7	4	6	Nineteenth
5	1	1	5	1	....	18	10	18	8	13	15	7	10	10	Twentieth
2	5	1	....	10	....	17	4	17	7	13	12	3	14	6	Twenty-first
....	1	....	....	7	....	15	4	12	8	4	8	5	6	8	Twenty-second
1	2	....	3	3	....	13	8	11	8	4	9	5	8	3	Twenty-third
9	1	....	....	5	1	17	30	22	18	24	22	17	30	69	Hospitals
48	36	10	49	85	1	395	208	405	303	230	280	156	310	262	Total

TABLE No. 15.

Showing by Months the Number of Deaths Occurring in the Various Public and Private Institutions, Hospitals, Reformatories, Etc., for the Year 1902.

Hospitals and Institutions.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Lakeside General Hospital	1	....	3	....	....	2	1	2	1	1	....	....	11
Knowlton Hospital	4	1	4	1	....	4	3	4	3	....	....	1	25
Children's Hospital	2	2	....	....	1	....	....	....	1	1	....	2	9
St. John's Home	1	....	....	....	....	....	....	....	....	....	....	....	1
St. Joseph's Hospital	3	2	5	2	6	2	4	5	3	7	5	3	47
St. Mary's Hospital	5	3	....	2	2	8	2	3	3	1	3	1	33
Little Sisters of the Poor	3	....	2	2	....	....	1	2	1	1	3	2	17
Milwaukee Hospital	5	7	6	4	3	2	5	3	10	4	1	5	55
Infants' Home	1	....	1	....	....	....	....	....	....	....	....	1	3
Trinity Hospital	3	6	4	4	4	2	3	5	8	8	4	5	56
St. Vincent's Asylum	2	3	3	4	3	3	10	9	6	1	11	4	59
Emergency Hospital	1	8	1	5	4	3	3	3	4	2	6	2	42
Notre Dame	2	....	2	2	....	....	....	1	....	1	....	....	8
Protestant Home	....	1	1	....	....	....	....	1	1	....	....	1	5
Riverside Sanitarium	....	1	....	....	....	1	....	....	....	....	1	....	3
Wisconsin General Hospital	....	1	....	2	....	....	....	1	....	....	1	1	6
Isolation Hospital	....	....	....	....	....	....	....	....	....	1	....	....	1
Others	....	2	1	2	1	7	....	2	3	5	2	1	26
Total	33	37	33	30	24	34	32	41	44	33	37	29	407

TABLE No. 16.

Showing Nativity of Those Dying in the City During 1902.

UNITED STATES.		FOREIGN.	
Milwaukee	1,798	Germany	957
Wisconsin, other than Milwaukee	209	Poland	149
New York	80	Ireland	109
Illinois	41	England	40
Pennsylvania	26	Bohemia	30
Massachusetts	23	Norway	27
Michigan	19	Austria	26
Ohio	19	Canada	19
Vermont	14	Holland	17
New Jersey	9	Russia	14
Iowa	8	Switzerland	11
Maine	8	Scotland	10
Missouri	8	Prussia	8
Minnesota	6	Sweden	7
Virginia	5	Denmark	6
Louisiana	4	Wales	6
Indiana	3	Italy	5
Kansas	2	France	3
Connecticut	2	China	2
Maryland	2	Bavaria	2
New Hampshire	2	New Foundland	1
California	1	New Brunswick	1
Tennessee	1	Nova Scotia	1
Nebraska	1	Pomerania	1
West Virginia	1	India	1
Rhode Island	1	Hungary	1
North Carolina	1	Not stated	8
Delaware	1	Total	1,458
Kentucky	1		
Not stated	42		
Total	2,338		

Grand Total 3,796

TABLE No. 17—Showing by Months the Deaths for Each

MONTH AND SEX.	Total Deaths.	Social Condition.				Nativity.		
		Single.	Married.	Widowed.	Divorced.	Milwaukee.	U. S. other than Mil.	Foreign.
January—								
Male	177	90	64	22	1	82	23	72
Female	147	51	62	34	.....	51	25	71
February—								
Male	148	79	53	16	.....	64	17	67
Female	126	61	35	30	.....	52	21	53
March—								
Male	174	90	63	20	1	76	35	63
Female	146	65	40	40	1	59	20	67
April—								
Male	175	112	51	11	1	102	20	53
Female	146	77	43	25	1	71	13	62
May—								
Male	163	94	55	12	2	74	18	71
Female	146	67	45	33	1	67	16	63
June—								
Male	158	83	63	10	2	73	19	66
Female	136	64	39	31	2	60	17	59
July—								
Male	178	117	45	14	2	109	12	57
Female	136	73	40	23	.....	74	18	44
August—								
Male	203	123	65	14	1	104	23	76
Female	181	103	51	26	1	98	21	62
September—								
Male	191	108	62	18	3	101	30	60
Female	139	77	36	25	1	74	23	42
October—								
Male	138	66	57	14	1	62	23	53
Female	129	57	42	30	.....	51	25	53
November—								
Male	176	85	67	20	4	70	36	70
Female	121	58	38	25	.....	51	28	42
December—								
Male	204	111	71	21	1	104	23	77
Female	158	82	44	32	.....	74	28	56
Total—								
Male	2085	1158	716	192	19	1021	279	785
Female	1711	835	515	354	7	782	255	674
Grand Total	3796	1993	1231	546	26	1803	534	1459

Sex, According to Social Condition, Nativity and Age.

AGE AT DEATH.																							
Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	90 to 95.	95 to 100.
42	8	....	4	1	9	2	3	12	9	6	9	2	9	7	5	9	7	11	14	6	2	...	...
26	3	2	....	2	3	4	2	3	6	4	13	6	8	7	8	8	9	12	11	5	...	5	...
46	4	3	1	....	2	....	3	5	6	4	6	7	8	7	4	6	9	6	9	6	5	...	1
26	4	4	1	1	3	3	7	5	2	11	7	6	1	2	6	5	10	6	10	5	1	...	...
40	16	4	1	2	3	2	5	8	6	8	4	8	9	2	7	9	12	7	9	7	1	4	...
40	6	1	....	....	3	1	6	1	11	4	8	4	7	8	9	7	5	8	9	4	3	...	1
54	14	3	2	2	14	2	11	5	4	8	6	11	1	5	2	9	4	5	5	3	3	2	...
32	7	7	3	1	7	1	6	9	4	6	6	11	3	5	5	6	4	9	6	7	1	...	...
46	8	3	3	1	6	4	7	6	2	4	4	9	9	13	4	8	10	5	6	4	1	1	...
31	6	3	3	4	3	3	8	5	2	8	5	6	6	7	6	4	7	10	9	6	4	...	...
40	10	1	3	1	4	1	4	6	4	5	9	8	7	10	10	9	8	9	5	4	...	...	...
33	5	4	2	3	5	3	4	5	5	9	2	8	3	2	4	9	9	6	7	4	4	...	...
67	6	5	4	2	6	1	5	6	9	6	5	7	5	3	9	8	4	7	5	5	2	1	...
31	12	6	1	2	7	1	4	8	11	3	5	4	2	9	4	8	5	4	3	2	3	...	1
53	19	4	4	2	6	9	7	5	6	10	9	8	5	4	10	9	7	9	9	2	4	1	1
58	12	7	2	2	6	2	3	7	6	8	10	4	8	6	2	11	8	4	8	3	3	1	...
45	22	5	4	2	3	3	7	8	8	5	5	7	9	9	10	5	12	7	7	4	4	...	...
43	8	4	4	1	4	2	....	4	8	7	8	4	5	5	3	10	8	3	2	3	1	2	...
34	6	3	1	....	5	1	3	3	4	5	11	7	8	6	5	7	12	8	5	3	1	...	...
27	4	1	....	....	5	....	6	8	7	5	3	6	7	6	11	5	7	4	7	7	...	2	1
33	10	2	2	1	8	4	4	9	10	8	13	12	10	8	6	7	9	10	1	5	4	...	...
21	3	7	2	1	6	6	2	5	6	8	4	6	2	3	7	4	5	2	9	10	...	2	...
54	12	5	5	2	8	1	6	7	6	6	15	9	12	6	7	13	5	10	6	7	2	...	...
41	11	3	2	1	6	3	6	4	8	....	5	2	5	7	3	5	17	7	6	11	5	...	...
554	135	38	34	15	74	30	65	80	74	75	96	95	92	80	79	99	99	94	81	56	29	9	2
409	81	49	20	18	58	29	54	64	76	73	76	67	57	67	68	82	94	75	87	67	25	12	3
963	216	87	54	33	132	59	119	144	150	148	172	162	149	147	147	181	193	169	168	123	54	21	5

TABLE No. 18.

Showing by Months the Disposition in the Various Cemeteries, and Otherwise, of the Bodies of Those for Whom Burial or Removal Permits Were Issued During the Year 1902.

Cemeteries, etc.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	Permits for Still Births.	Per. for Bodies brought to City.	Grand Total.
Union	82	61	75	88	82	80	73	90	72	68	56	84	911	88	115	1114
Forest Home	55	43	50	40	46	31	39	39	50	34	33	50	510	27	165	*702
Calvary	70	73	66	64	57	75	85	98	70	65	84	81	888	68	4	960
Polish Union	31	25	38	43	33	41	53	47	52	39	29	53	484	56	5	545
Pilgrims' Rest	22	19	34	25	29	12	14	39	21	12	29	23	279	31	1	311
Wanderer's Rest	12	15	10	18	13	12	13	13	16	7	17	15	161	15	3	179
Trinity	10	5	11	8	13	10	6	14	6	6	5	15	109	10	4	123
Greenwood	....	....	....	....	1	3	2	2	2	2	3	....	15	....	1	16
Spring Hill	3	....	3	....	1	....	2	....	2	....	....	1	12	1	....	13
Second Home	....	1	2	1	1	1	....	....	3	2	....	2	13	2	2	17
County Farm	2	2	2	6	3	7	2	5	3	8	4	2	46	11	1	58
For Shipment	36	29	29	28	30	22	24	36	33	23	33	38	357	10	12	379
For Anatomical Purposes	1	1	....	....	....	....	1	1	....	1	4	2	11	3	1	15
Total	324	274	320	321	309	294	314	384	330	267	297	362	3796	322	314	4432

* Of this number 38 were for cremation.

TABLE No. 19.

Showing by Months the Occupations of Those Dying in the City During 1902.

OCCUPATION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Actress	....	....	....	....	....	....	1	....	....	....	....	....	1
Agent	....	....	2	....	....	2	....	....	....	1	1	1	7
Artist	....	....	....	....	1	1	....	....	....	....	....	1	3
Baggage Master	....	....	....	....	....	....	1	....	....	....	....	....	1
Baker	....	....	....	1	....	1	....	2	....	....	....	....	4
Ball Player	....	....	....	....	1	....	....	....	....	....	....	....	1
Banker	1	....	1	....	....	....	....	1	....	....	....	1	4
Barber	....	....	2	1	....	....	....	....	1	1	....	....	5
Bartender	3	1	3	1	1	1	1	2	3	2	3	1	22
Beer Peddler	1	....	....	....	....	....	....	....	....	....	....	....	1
Bicycle Rider	....	....	1	....	....	....	....	....	....	....	....	....	1
Blacksmith	....	1	....	....	....	1	2	1	....	....	2	1	8
Bookbinder	....	....	....	1	....	....	....	....	....	....	....	2	3
Bookkeeper	1	3	2	....	....	2	....	....	....	1	1	1	14
Bottling Girl	....	....	....	....	1	....	....	....	....	....	....	....	1
Boxmaker	....	1	....	....	....	....	....	....	....	....	....	....	1
Brakeman	1	1	1	....	....	1	1	1	....	....	....	....	6
Brewer	....	1	1	....	1	1	....	....	....	....	2	....	6
Bridge Builder	....	....	1	....	....	....	....	....	....	....	....	....	1
Bridge Tender	....	....	....	....	1	....	....	....	1	....	....	....	2
Broom Maker	....	1	....	....	....	....	....	....	1	....	....	....	2
Burglar	....	....	....	....	....	....	....	....	....	....	....	1	1
Butcher	1	3	2	2	....	....	1	....	3	....	2	....	14
Butter Maker	....	....	....	....	....	1	....	....	....	....	....	....	1
Cabinet Maker	....	....	....	....	1	....	1	....	....	....	....	2	4
Capitalist	....	....	2	....	....	....	....	....	....	1	1	....	4
Carpenter	6	5	3	3	3	3	4	3	9	4	4	4	51

TABLE No. 19—Continued.

OCCUPATION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Car Repairer	....	....	....	....	1	....	1	....	1	1	....	....	4
Carriage Maker	....	....	....	....	1	....	....	....	....	....	....	....	1
Cattle Dealer	....	....	....	....	....	1	....	....	....	....	....	....	1
Carver	....	1	....	....	....	....	....	1	....	....	....	....	2
Christian Scientist	....	....	....	....	....	....	....	....	....	....	1	....	1
Cigar Maker	2	1	1	....	....	1	1	3	1	1	....	3	14
Clerk	9	3	3	2	3	1	3	2	2	4	9	3	44
Cloth Examiner	....	....	....	1	....	....	....	....	....	....	....	....	1
Coachman	1	1	....	....	....	1	....	....	....	....	....	....	3
Collector	....	1	1	....	....	....	....	....	....	....	....	....	2
Commercial Traveler	1	2	....	....	1	....	....	1	2	....	1	1	9
Conductor	1	....	....	....	....	....	....	....	....	....	....	....	1
Contractor	1	2	....	....	1	1	....	....	....	....	1	2	8
Cook	....	....	....	1	....	....	....	1	....	....	....	....	2
Cooper	1	1	....	....	4	2	1	1	1	1	3	....	15
Coppersmith	1	....	....	....	....	....	....	....	....	....	....	....	1
Decorator	....	....	....	1	....	....	....	....	....	....	1	....	2
Dentist	1	....	....	....	....	....	1	....	1	....	....	....	3
Draughtsman	....	....	....	....	....	....	....	....	....	....	....	1	1
Dress Maker	2	....	....	1	....	3	1	....	2	4	....	1	14
Driver	....	....	....	1	....	....	....	....	....	....	....	....	1
Druggist	....	....	1	....	....	2	....	....	....	....	....	....	3
Editor	....	2	1	....	....	....	....	....	....	....	....	....	3
Electrician	....	....	....	....	....	....	....	....	....	1	....	1	2
Elevator Boy	....	....	....	....	1	....	....	....	....	....	....	....	1
Enameler	....	....	....	....	....	....	....	1	....	....	....	....	1
Engineer	2	1	1	....	....	1	1	....	2	2	3	2	15
Express Driver	....	....	1	....	....	....	....	....	....	....	....	1	2
Farmer	4	3	7	4	3	1	6	4	1	2	4	1	40
Fireman	....	3	1	....	....	....	....	....	....	....	1	....	5
Fisherman	....	....	....	....	....	....	....	....	....	....	....	1	1
Fish Dealer	1	....	....	....	....	....	....	....	....	....	....	....	1
Florist	....	....	....	....	....	....	1	....	1	....	....	....	2
Foreman or Woman	....	....	....	1	....	....	....	....	1	....	....	2	4

TABLE No. 19—Continued.

OCCUPATION.	January.	February.	March.	April	May.	Juue.	July.	August.	September.	October.	November.	December.	Total.
Furnace Builder	....	....	....	....	....	....	....	....	....	....	....	1	1
Furrier	....	....	....	....	....	....	....	....	....	....	1	....	1
Gardener	....	....	....	....	....	....	....	3	1	....	....	....	4
Gas Fitter	1	....	....	....	....	1	....	....	....	....	....	....	2
Glass Blower	1	....	....	....	....	....	....	....	....	....	....	....	1
Glove Maker	....	....	....	....	....	....	....	....	....	....	1	....	1
Harness Maker	....	....	....	....	....	....	2	2	....	....	1	....	5
Hide Buyer	....	....	....	....	....	....	....	....	....	....	1	....	1
Hotelkeeper	....	1	....	....	....	....	....	....	....	....	....	....	1
Housekeeper	80	50	63	52	69	51	44	61	49	58	48	58	683
Housemover	....	1	....	....	....	....	....	....	....	....	....	....	1
Insurance Agent	....	....	....	....	....	....	....	1	1	....	2	....	4
Iron Worker	....	....	....	....	1	3	1	....	....	....	1	....	6
Janitor	....	....	....	....	1	....	....	....	1	....	1	1	4
Jeweler	....	....	....	....	....	1	....	1	....	....	....	1	3
Joiner	1	....	....	....	....	....	....	....	....	....	....	....	1
Laborer	17	21	22	25	23	25	30	27	24	28	24	27	293
Lake Captain	....	....	....	1	....	....	....	2	1	....	....	1	5
Laundryman	....	....	....	....	....	1	....	....	....	....	....	....	1
Lawyer	1	....	....	....	1	1	....	....	1	1	....	....	5
Lecturer	....	....	....	....	....	1	....	....	....	....	....	....	1
Life Insurance	1	....	....	....	....	....	....	....	....	....	....	....	1
Literary	....	....	....	1	....	....	....	....	....	....	....	....	1
Liveryman	....	....	....	....	....	1	....	....	....	....	....	....	1
Lumberman	....	....	....	....	....	....	....	1	....	....	....	....	1
Machinist	4	2	1	3	4	....	....	2	1	2	1	2	22
Mail Carrier	1	....	....	....	....	....	....	....	....	....	....	....	1
Manager	....	....	....	....	....	....	....	....	....	....	1	....	1
Manufacturer	1	1	2	....	....	1	....	2	1	....	1	....	9
Marble Driller	....	....	....	....	....	....	....	....	....	....	....	1	1
Marquetiere	....	....	....	....	1	....	....	....	....	....	....	....	1
Mason	2	3	....	3	1	....	1	1	4	1	2	....	18
Merchant	5	2	3	7	5	3	4	4	....	1	4	5	43
Midwife	....	....	....	1	....	....	....	1	....	2	1	....	5

TABLE No. 19—Continued.

OCCUPATION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Milk Dealer	....	1	....	....	....	1	....	....	....	....	....	1	3
Miller	....	....	1	....	....	....	....	....	....	....	....	1	2
Milliner	....	1	....	....	....	....	1	....	2	....	....	2	6
Minister	....	1	....	....	....	....	....	....	....	....	....	....	1
Moulder	....	....	1	....	....	....	....	1	....	1	3	....	6
Musician	1	1	2	....	....	2	....	....	1	....	1	1	9
Newspaper Man	....	....	....	1	....	....	....	....	....	....	....	....	1
Night Watch	2	....	....	....	....	....	....	....	1	1	1	1	6
None	17	13	18	22	16	16	24	20	21	11	17	29	224
Nurse	1	....	....	....	1	....	....	....	....	....	1	....	3
Oiler	....	....	....	....	....	....	....	1	....	....	1	....	2
Organ Builder	1	....	....	....	....	....	....	....	....	....	....	....	1
Organ Grinder	....	1	....	....	....	....	....	....	....	....	....	....	1
Painter	1	2	3	1	1	2	....	3	2	1	....	3	19
Pattern Maker	....	....	....	....	1	....	....	....	....	....	....	....	1
Peddler	....	1	1	1	....	....	....	1	....	1	....	1	6
Photo Engraver	....	....	....	....	....	....	....	....	1	....	....	....	1
Physician	....	....	....	....	....	....	....	1	....	....	....	....	1
Plumber	....	....	....	1	....	....	....	....	1	....	....	....	2
Policeman	....	....	....	....	....	....	....	1	....	....	....	....	1
Porter	....	1	1	....	1	....	....	....	....	....	....	....	3
Potter	....	....	1	....	....	....	....	....	....	....	....	....	1
Printer	1	....	3	....	2	....	2	....	....	1	....	1	10
Promoter	....	....	1	....	....	....	....	....	....	....	....	....	1
Railroading	1	....	1	....	....	1	....	....	....	2	1	1	7
Railroad Fireman	....	....	....	....	....	....	....	....	1	....	....	....	1
Real Estate	2	....	....	....	....	1	....	....	....	....	1	1	5
Rope Maker	....	....	....	....	1	....	....	....	....	....	....	....	1
Sailor	1	....	1	....	1	3	2	3	3	1	2	....	17
School boy or girl	4	1	8	4	3	2	2	2	2	....	6	....	34
Servant	....	2	....	2	1	....	1	2	....	4	....	1	13
Sexton	....	....	....	....	....	....	....	....	....	1	....	....	1
Shoemaker	1	2	....	2	3	1	....	2	....	4	....	3	18
Silver Plater	....	....	....	1	....	....	....	....	....	....	....	....	1

TABLE No. 19—CONTINUED.

OCCUPATION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Steam Fitter	....	....	1	....	....	....	....	....	....	....	....	....	1
Stenographer	....	....	....	....	....	1	....	2	....	....	....	1	4
Street Railway Employe	....	....	....	....	....	....	....	....	....	....	....	1	1
Superintendent	....	....	....	....	....	....	....	....	....	....	1	....	1
Switchman	....	....	....	1	1	....	....	....	1	....	....	1	4
Tailor	6	....	2	2	2	2	2	3	1	1	5	3	29
Tanner	4	1	2	1	....	....	....	1	2	1	1	1	14
Teacher	1	2	2	1	1	....	....	1	....	2	....	1	11
Teamster	1	....	1	2	2	3	4	1	1	1	3	3	22
Telegraph Operator	1	1	....	....	....	....	1	....	....	....	1	....	4
Tinner	....	....	....	....	1	....	....	....	1	....	1	2	5
Tobacco Packer	....	....	....	....	....	....	....	....	....	....	1	....	1
Trunk Maker	....	....	....	....	....	....	....	....	....	....	1	....	1
Undertaker	....	....	....	....	....	....	1	....	....	....	....	1	2
Upholsterer	1	....	....	....	....	....	....	....	....	....	....	....	1
Veterinary Surgeon	....	....	....	....	....	....	....	1	....	....	....	....	1
Wagon Maker	....	....	....	....	....	....	....	....	....	....	....	1	1
Waiter	....	....	....	1	....	....	....	1	....	....	....	....	2
Watch Maker	....	....	....	....	....	....	....	....	....	....	....	1	1
Wire Worker	....	....	....	....	....	....	1	....	....	....	....	....	1
Total													2024

BIRTHS.

TABLE No. 20.

Showing Reported Births, as to Color, Sex, and by Whom Reported, by Months.

Color Sex Reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
White	558	534	531	640	556	672	627	612	702	774	510	682	7,398
Colored	.....	.....	1	3	.....	.....	1	2	.....	.....	.....	1	8
Male	294	272	258	342	276	338	298	296	340	391	267	336	3,708
Female	264	262	274	301	280	334	330	318	362	383	243	347	3,698
Physician	223	205	179	278	243	284	287	228	294	252	244	270	2,987
Midwife	335	329	353	365	313	388	341	386	408	522	266	413	4,419
Total	558	534	532	643	556	672	628	614	702	774	510	683	7,406

TABLE No. 21.

Births Reported by Wards for the Year 1902.

WARDS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
First	6	6	11	14	5	7	4	10	13	6	8	7	97
Second	5	18	12	13	6	12	26	13	15	18	10	12	160
Third	25	7	3	20	11	5	17	10	2	16	11	16	143
Fourth	10	14	9	18	11	10	16	5	16	8	9	17	143
Fifth	15	6	11	17	12	15	7	12	8	17	4	13	137
Sixth	17	22	19	24	23	39	24	21	21	22	12	27	271
Seventh	2	4	2	4	3	5	8	5	7	4	4	6	54
Eighth	25	20	14	27	16	13	13	18	11	16	11	10	194
Ninth	37	26	28	42	39	41	45	32	41	61	24	54	470
Tenth	35	28	36	27	31	26	36	32	28	37	18	25	359
Eleventh	54	44	59	47	34	63	49	57	75	65	55	38	640
Twelfth	25	27	29	22	30	34	28	30	36	52	42	42	397
Thirteenth	34	33	22	32	40	40	40	22	31	41	26	38	399
Fourteenth	95	41	70	94	54	84	52	80	110	91	63	109	943
Fifteenth	18	15	13	18	21	26	17	20	24	19	19	20	230
Sixteenth	7	11	5	9	13	12	14	11	9	13	12	7	122
Seventeenth	21	23	27	29	26	13	17	25	31	29	10	26	277
Eighteenth	21	34	18	22	16	25	44	27	33	36	33	33	342
Nineteenth	19	20	18	14	27	27	22	36	31	25	33	28	300
Twentieth	26	36	44	44	34	43	32	37	45	48	29	33	451
Twenty-first	18	29	19	38	33	36	29	35	30	44	17	30	358
Twenty-second	17	29	23	24	23	30	26	23	35	33	17	19	299
Twenty-third	6	7	8	16	8	11	11	11	9	16	9	18	131
Not stated	20	34	32	28	40	55	51	42	41	47	34	55	479
Total	558	534	532	643	556	672	628	614	702	774	510	683	7,406

TABLE No. 22.

Nativity of Fathers.

BIRTHPLACE.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Milwaukee	97	88	88	120	124	111	113	115	114	172	88	104	1,334
Wisconsin, outside of Milwaukee	70	62	55	76	78	95	93	65	78	91	64	80	907
Others of United States	51	53	80	69	75	67	81	58	75	97	50	80	836
Germany	217	205	191	232	154	258	201	241	255	273	201	244	2,672
Other European Countries	119	123	112	132	120	129	126	128	173	133	98	164	1,557
Unknown or not stated	4	3	6	14	5	12	14	7	7	8	9	11	100
Total	558	534	532	643	556	672	628	614	702	774	510	683	7,406

Nativity of Mothers.

BIRTHPLACE.	January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November.	December.	Total.
Milwaukee	117	107	115	133	91	141	130	135	151	155	97	120	1,492
Wisconsin, outside of Milwaukee	73	72	71	99	60	108	126	77	87	66	93	101	1,033
Others of United States	58	57	69	81	65	74	80	68	85	84	46	83	850
Germany	201	182	181	203	196	223	168	216	224	293	184	239	2,510
Other European Countries	109	114	95	123	134	133	110	117	153	164	89	134	1,475
Unknown or not stated	.....	2	1	4	10	3	4	1	2	12	1	6	46
Total	558	534	532	643	556	672	628	614	702	774	510	683	7,406

MARRIAGES.

TABLE No. 23.

Showing by Months the Total Number of Marriages Reported and the Place of Residence of Husband.

MONTHS.	Total Marrages Reported.	Husband's Residence.					
		Milwaukee.	Wisconsin, outside Milwaukee.	Chicago.	Illinois, outside Chicago	Other places.	Residence not given.
January	150	110	11	19	2	8	.....
February	150	130	9	5	1	5	.....
March	118	98	9	4	2	5	.....
April	176	142	12	10	1	11	.....
May	220	179	18	13	3	7	.....
June	304	246	32	9	3	14	.....
July	259	209	23	15	3	8	1
August	189	145	14	20	1	9	.....
September	286	218	16	23	5	22	2
October	283	231	22	14	5	8	3
November	268	223	18	11	6	9	1
December	213	176	14	8	3	12	.....
Total	2,616	2,107	198	151	35	118	7

TABLE No. 24.

Showing by Months the Total Number of Marriages Reported, With Birthplace of Contracting Parties.

MONTHS.	Total Marriages reptd.	BIRTHPLACE OF BOTH PARTIES.									
		Milwaukee.		Wis., outside Milwaukee.		Others of U. S.		Foreign.		Not Given.	
		H.	W.	H	W.	H.	W.	H.	W.	H.	W.
January	150	30	44	23	36	29	22	68	48	.....	.....
February	150	39	46	24	20	20	29	67	54	.....	1
March	118	29	38	14	24	35	22	40	34	.....	.....
April	176	49	68	30	31	36	31	61	46	.....	.....
May	220	59	74	33	41	35	29	92	75	1	1
June	304	68	135	72	56	55	34	109	79	.....	.....
July	259	93	102	55	51	35	27	76	79	.....	.....
August	189	40	68	33	36	42	25	74	60	.....	.....
September	286	74	119	39	36	55	38	117	91	1	2
October	283	97	118	46	45	41	31	99	89	.....	.....
November	268	77	99	42	45	51	34	98	90	.....	.....
December	213	53	81	30	32	29	22	101	78	.....	.....
Total	2,616	708	992	441	453	463	344	1,002	823	2	4

TABLE No. 25.

Showing by Months the Total Number of Marriages Reported, the Color of the Contracting Parties, and the Ceremony by Which the Marriage was Performed.

MONTHS.	Total Marriage reptd.	COLOR.		CEREMONY.						
				Religious.			Civil.			
		H.	W.	Prot.	Cath.	Jew.	J. P.	Judge	Court Com.	Ethical.
January	150	.....	.....	83	30	7	21	7	2	.....
February	150	1	1	61	61	3	20	4	1	.....
March	118	1	1	51	14	2	46	5	.....	.....
April	176	3	3	88	31	6	47	4	.....	.....
May	220	.....	.....	99	61	3	46	9	2	.....
June	304	.....	.....	185	87	7	17	7	1	.....
July	259	.....	.....	109	80	.....	60	10	.....	.....
August	189	.....	.....	92	62	8	18	7	2	.....
September	286	.....	.....	115	104	12	49	4	.....	2
October	283	.....	2	137	95	21	25	4	1	.....
November	268	.....	.....	120	102	19	26	1	.....	.....
December	213	1	.....	110	51	6	40	6	.....	.....
Total	2,616	6	7	1,250	778	94	415	68	9	2

Total number of marriages for the year, 2,617. White, 2,604; colored 13.

REPORT

OF

ANALYST.

REPORT OF ANALYST.

F. M. Schulz, M. D., Commissioner of Health:

SIR—I have the honor to submit the following report of the work done in the chemical and bacteriological laboratories of the Department during the year 1902.

The work of the year has been of the same character and essentially the same scope as heretofore.

It will be observed that the examination of milk has received, as it deserves, special consideration. Though nearly a thousand more samples were taken than were taken in 1901, the number of samples below standard was considerably less than for that year.

We wish to give special credit to inspectors James Cunningham and Harry Kiehl for the very efficient service they have rendered in this department of the work.

In the bacteriological laboratories some special work has been performed, at the request of the School Board, to determine relative merits of several deodorants and disinfectants for use in the laboratories of the public schools.

For our own satisfaction and for the purpose of determining whether we are employing the most economical and convenient method of house disinfection, we tested a number of agents, used for this purpose, as to their germicidal action, penetration of clothing, etc., time required for action, convenience of application and cost.

We demonstrated the superiority of the system at present employed and recommend its continuance. We do not detail this work since nearly all these agents were proprietary articles, and our report might thus be used in the hands of the manufacturers for advertising purposes, which we do not believe the Department desires.

Respectfully submitted,

OTHO FIEDLER, M. D.,

Bacteriologist.

TABLE No. 1.

Number of milk dealers licensed during the year	892
Total samples of milk analyzed, Jan. 1, 1901—Jan. 1, 1902	7,775
Average per cent. of fat of 7,775 samples	3.97%
Number of samples below 3% butter fat	266
Per cent. below 3%	2.67%
Average fat of 266 samples	3.42%
Average fat of 7,509 samples	3.80%
Total number samples brought in by inspectors	7,237
Number of samples below 3%	200
Per cent. below 3%	2.7%
Number of samples brought in by private individuals	538
Average per cent. of fat of 538 samples	3.44%
Number of samples below 3%	66
Per cent. below 3%	12.2%
Number of samples from depot	5,573
Average fat of 5,573 samples	3.81%
Number of samples below 3%	95
Per cent. below 3%	1.7%
Number of samples of cream tested	1,986
Average per cent. of fat of 1,986 samples	19.45%
Number of arrests made	15
Amount of fines imposed	$250
Skimmed milk and buttermilk analyzed	16
Gallons of milk confiscated	640

TABLE No. 2.

MONTH.	Samples Analyzed.	Average Fat.	Number of Quarts.	Below 3 per cent.	DISPOSAL.						CREAM.		Average Fat.
					Dumped at Depot.	Warned.	Private.	Arrested.	Fines.	No Action.	Depot.	Received.	
January	661	3.85	20,744	17	.....	11	3	.....	.....	3	135	15	19.77
February	622	3.82	22,825	13	.....	.....	4	1	$25 00	8	152	12	19.80
March	763	3.80	25,828	21	.....	11	5	.....	.....	5	173	6	19.88
April	529	3.64	16,992	24	.....	.....	14	.....	.....	10	130	22	19.49
May	691	3.59	20,144	29	.....	6	8	.....	.....	15	204	30	20.67
June	757	3.50	18,183	50	7	22	6	2	25 00	13	122	23	20.40
July	664	3.84	15,679	40	2	13	11	4	100 00	10	142	2	19.32
August	513	3.66	11,459	21	.....	12	4	2	50 00	3	174	6	18.77
September	635	3.83	17,413	16	3	5	5	3	25 00	.....	147	11	18.83
October	703	4.03	25,025	17	.....	7	4	.....	.....	6	177	.....	19.09
November	576	3.51	18,318	6	.....	2	1	1	.....	2	141	1	17.78
December	661	4.09	19,657	12	8	1	1	2	25 00	.....	159	2	18.72
Totals	7,775	3.76	232,267	266	20	90	66	15	$250 00	75	1,856	130	19.45

TABLE No. 3—Table Showing Quality

SOURCE.	Number of Samples.				Average Fat.			
	1899.	1900.	1901.	1902.	1899.	1900.	1901.	1902.
City Dealers	3,655	3,345	3,198	1,664	3.74	3.76	3.72	3.67
Depots	2,007	1,972	2,664	5,573	3.80	3.81	3.73	3.83
Received	656	297	412	538	3.75	3.70	3.78	3.44
Total.....	6,318	5,614	6,274	7,775	3.76	3.77	3.73	3.76
Cream	276	908	1,574	1,986	20.95	19.46	19.64	19.45

of Milk from Various Sources.

Below 3 Per Cent.				Per Cent. Below 3 Per Cent.				
1899.	1900.	1901.	1902.	1899.	1900.	1901.	1902.	
154	105	127	105	4.21	3.11	3.97	6.33	.....City Dealers
49	22	67	95	2.44	1.11	2.52	1.70	..... Depots
45	23	30	66	6.86	7.80	7.28	12.26	..... Received
248	150	234	266	3.92	2.67	3.73	3.42	..... Total

TABLE No. 4.

Summary of Disposal of Samples Below Standard.

Private individuals	66
Depot—Confiscated	20
Not confiscated	75
Arrests—Below standard	14
Preservatives	1
Warned	90
Total	266

TABLE No. 5.

CHEMICAL ANALYSES, 1899-1900-1901-1902.

	1899.	1900.	1901.	1902.
Milk	6,318	5,614	6,274	7,775
Cream	276	908	1,574	1,986
Lake water	18	72	5	13
Well water	120	155	136	87
Miscellaneous	67	25	35	62
Totals	6,799	6,774	8,024	9,913

TABLE No. 6.

BACTERIOLOGICAL AND MICROSCOPICAL EXAMINATIONS.

	1899.	1900.	1901.	1902.
Diphtheria	162	417	382	384
Sputum	47	65	117	292
Blood (Widal test)	31	58	81	56
Miscellaneous	29	34	106	39
Totals	269	574	686	711

REPORT

OF

CHIEF SANITARY INSPECTOR.

REPORT OF CHIEF SANITARY INSPECTOR.

F. M. Schulz, M. D., Commissioner of Health:

SIR—I hereby respectfully submit my fifth annual report to you, in which, and in the accompanying tables, will be found a detailed statement of the work reported by the sanitary inspectors.

These inspectors have made 19,722 complaint reports and reinspections; 96 cow stable reports; 14 ice reports, and 2,529 citizens complaint reports. Of the latter 1,756 were verified, the others were dismissed as of no importance or on finding the nuisances abated.

The Department has issued 4,874 orders, consisting of 2,084 orders to clean privy vaults, 267 to make sewer connections, 2,725 general miscellaneous orders, and 202 cease orders.

There has been no reports of glandered horses during the past year.

The ice for domestic use is brought in from the country lakes, as all ice within Milwaukee County is supposed to be used exclusively for cooling purposes. Ice machines have been installed in many places which formerly used immense quantities of river ice.

During the past year the Department has examined 9,761 samples of milk and cream, of which 7,237 were collected by the inspectors and 538 brought in by individuals. One hundred samples of water and 62 samples of meat and food products were also examined.

The meat and food inspectors have seized and destroyed 133 calves and 17,906 pounds of other meats and fish; 180 dozen eggs and 9,724 pounds of nuts, fruit and vegetables.

While engaged in house to house inspection the inspectors have condemned nearly all the privy vaults in the wards in the central and older parts of the city, most of them disappearing, and those remaining would be quickly abolished if preceded by a few vigorous prosecutions.

One of the greatest dangers to which our population is exposed, especially the juvenile portion, are those vile abominations, styled by courtesy, "wells of living water." These wells, in the interest of public

health, should all be condemned where there are water mains in the streets. At present the Department is removing only those against which complaint has been made, or sickness of those using has been reported, and a chemical analysis shows the water unfit for domestic use.

The Department having become convinced that there existed some unknown source of smallpox contagion on the West Side of the city, on the first of October the entire force of sanitary inspectors were detailed to make a systematic search from house to house in a portion of the Ninth and Tenth wards for sick cases which had not been reported. During the year, up to this time, there had been reported 112 cases, only 3 during September. The result of the inspection was a surprise. On October 1st the inspectors found 2 cases, October 2nd 1, October 3rd 1, October 4th 3, October 6th 1, October 7th 6, and in addition to these 12 cases about a score of persons who had recently had smallpox were discovered. These patients were all removed to the Isolation hospital, and all places where the contagion was thought to exist were carefully disinfected, and all persons known to have been exposed, besides others in the neighborhood, were vaccinated. All absentees of the neighboring schools, both public and private, were looked after daily for the next four months. As a result of these exposures during the month of October we had 72 cases, in November 47, in December 24, in January 32, and in February 20, a total of 257 cases during the calendar year and 78 during the remainder of the fiscal year ending April 13th.

The city is divided into ten sanitary districts with an inspector assigned to each, and into four meat and food inspection districts, each under the supervision of a meat inspector, as follows:

SANITARY INSPECTION DISTRICTS.

Inspector No. 103—Harry Kiehl, Tenth ward and collecting milk samples.

Inspector No. 104—J. O. Osmunson, Eighth, Twenty-third and Eleventh wards north of Mitchell street.

Inspector No. 106—E. Seaman, First, Seventh and Eighteenth wards.

Inspector No. 108—Walter Fremont, Sixth, Thirteenth and Twenty-first wards, south of Wright and east of Third street, and smoke nuisance.

Inspector No. 110—C. F. Kruckenberg, Twentieth, Thirteenth and Twenty-first wards north of Wright and east of Third street.

Inspector No. 112—P. J. King, Second ward and plumbing inspector.

Inspector No. 113—J. Campbell, Fourteenth and Seventeenth, and the Eleventh and Twelfth wards south of Mitchell street, and smoke complaints.

Inspector No. 115—J. M. Calligan, Third, Fourth, Fifth and Twelfth wards north of Mitchell street.

Inspector No. 116—Oscar Klein, Ninth, Nineteenth and Twenty-second wards.

Inspector No. 117—T. Boutin, Fifteenth and Sixteenth wards.

FOUR DISTRICTS FOR THE INSPECTION OF MEAT, FOODS, FRUIT AND VEGETABLES.

Inspector No. 121—F. J. Carney, slaughter houses and Fourth, Fifth, Eighth, Fifteenth, Sixteenth and Twenty-third wards.

Inspector No. 122—John Falbe, commission houses, Third, Seventh, Nineteenth and Twenty-second wards.

Inspector No. 123—Ph. Stock, First, Second, Sixth, Tenth, Thirteenth, Eighteenth and Twenty-first wards.

Inspector No. 124—Edw. McGrath, Eleventh, Twelfth, Fourteenth and Seventeenth wards.

ORDERS PERTAINING TO BAKERIES.

Cease sleeping in bake shop	1
Clean bake shop	6
Provide cement or hardwood floor	9
Remove water closet	4
Whitewash bake shop	6

BUTCHER SHOPS.

Cease storing meats or making sausage in basement	1
Clean ice box	1
Clean slaughter house	1
Provide condenser	1
Remove barrels	11
Whitewash killing room	1

ORDERS PERTAINING TO BARNS.

Clean barns	5
Clean tank	2
Connect barn to sewer	16
Connect barn to tank	2
Disinfect barn	1
Extend shaft	1
Fill manure pit	1
Lock barn	2

Provide light for barn	1
Provide new floor for stable	4
Rebuild barn	1
Repair barn	1
Ventilate cow and livery barn	1
Whitewash barn	16

ORDERS PERTAINING TO PLUMBING, ETC.

A.

Clean sewer	63
Connect bar sink	5
Connect cistern	2
Connect ice box	15
Connect roof conductors	29
Connect sink	15
Provide sewer	7
Repair and relay sewer	28
Seal sewer	4

B.

Clean sink and waste pipe	6
Disconnect sink	2
Provide sink	3
Renew woodwork of sink	1
Repair sink	3
Trap sink	30

C.

Clean bath tub	1
Extend vent pipe	2
Provide water	5
Renew plumbing	4
Repair gas pipe	1
Repair plumbing	105
Repair waste pipe	6
Repair water pipe	26
Trap ice box	1
Ventilate traps	1

ORDERS PERTAINING TO VAULTS AND URINALS.

A.

Bank vault	1
Clean ditch	1
Clean vault	4,835
Cover vault	1

Disinfect vault	5
Fill vault	953
Provide water tight vault	1
Remove vault from lot line	1

B.

Clean urinal	9
Connect urinal	6
Disinfect urinal	1
Provide flush for urinal	6
Provide urinal	4
Remove urinal	2
Renew urinal	1
Repair urinal	2

C.

Clean slop hopper	5
Provide slop hopper	3
Repair slop hopper	3

D.

Clean water closet	72
Lock water closet	1
Protect plumbing	1
Provide door for water closet	1
Provide water closet	811
Provide water for water closet	26
Remove pan closet	18
Renew woodwork of water closet	5
Repair water closet	34

E.

Clean catch basin	2
Provide catch basin	19
Remove catch basin	1
Repair catch basin	5

ORDERS TO CEASE COMMITTING NUISANCE.

Cease burning hides and scrapings	2
Cease burning manure	1
Cease draining into alley	2
Cease dumping liquid manure	1
Cease emptying drywell into street gutter	2
Cease making noise at night	1
Cease receiving night soil or selling milk	7
Cease shaking carpets from window	1

Cease throwing garbage in yard	4
Cease throwing liquid into garbage box	2
Cease throwing rags in yard	2
Cease throwing slops and waste water in alley	4
Cease throwing slops in yard	13
Cease turning off water	1
Cease using milk from infected cow	1
Cease urinating in basement	1

ORDERS PERTAINING TO GARBAGE AND MANURE NUISANCES.

GARBAGE.

Clean garbage box	2
Clean garbage chute	5
Disinfect garbage box	3
Provide ash box	65
Provide cover for ash box	1
Provide cover for garbage box	3
Provide garbage chute	1
Provide garbage box	303
Remove garbage box	2
Ventilate brick garbage box	1

MANURE.

Provide manure box	217
Provide cover for manure box	26
Remove manure	122
Remove manure box	4
Repair manure box	7
Ventilate manure box	1

MISCELLANEOUS ORDERS.

Bank house	8
Boil water before using	10
Calcimine rooms	1
Clean alley	25
Clean and disinfect under floor	6
Clean and fill cesspool	2
Clean and fill cistern	41
Clean and repair eave gutters	4
Clean and whitewash house	2
Clean cellar, basement and premises	55
Clean chimney	1
Clean cistern	12
Clean dry well	2

Clean pen for poultry	13
Clean rendering works	3
Clean shed	5
Clean stairs	1
Clean under sidewalk	4
Clean yard	73
Close house and shed	2
Confine pigeons	4
Confine poultry	6
Confine rabbits	1
Connect stove to chimney	1
Cover cistern	2
Destroy bedding, etc	1
Disinfect basement	4
Disinfect premises	4
Drain basement and cellar	10
Enclose under sidewalk	1
Extend chimney	14
Fill cellar	3
Fill cesspool	2
Fill cistern	11
Fill ditch	1
Fill or drain lot	15
Fill well	87
Pave railroad track	2
Provide eave gutters for house or barn	29
Provide earth closet	1
Provide floor for shed	1
Provide light for water closet	1
Provide new ice box	1
Provide new privy house	1
Provide retaining wall	4
Provide spark arrester	1
Provide window area wall	1
Remove bones	1
Remove cistern	11
Remove cotton trees	2
Remove filth	22
Remove gas engine	1
Remove hogs	2
Remove horse from under house	2
Remove offal every two days	1
Remove pigeons	2
Remove poultry	14
Remove poultry coop	8

Remove rabbits	1
Remove rags	4
Remove rats	3
Remove rubbish and ashes	59
Remove scavenger wagon	1
Remove wall paper	1
Remove wooden drain	1
Remove chute	1
Remove conductors	4
Remove floor	2
Repair basement	9
Repair chimney	1
Repair eave gutters	24
Repair floor	2
Repair privy	3
Repair porch	1
Repair private alley	4
Repair retaining wall	1
Repair roof	3
Repair roof condensors	29
Repair street gas main	1
Repair wooden sewer	1
Ventilate cellar	3

CONFISCATIONS BY MEAT AND FOOD INSPECTORS.

Beef, pounds	2,910
Lamb, pounds	222
Mutton, pounds	475
Pork, pounds	1,315
Spareribs, pounds	2,500
Shoulder ribs, pounds	410
Sausage, pounds	1,118
Salt meats, pounds	650
Pigs' feet, pounds	110
Poultry, pounds	1,251
Rabbits, pounds	530
Fish, pounds	2,850
Smoked fish, pounds	320
Oysters, pounds	2,605
Lobsters, pounds	420
Crabs, pounds	220
Fruit, pounds	5,282
Vegetables, pounds	3,650
Nuts, pounds	792
Eggs, dozen	180
Cheese, pounds	950

Respectfully submitted,

T. H. CURTIS,

Chief Sanitary Inspector.

REPORT

OF

SECRETARY.

REPORT OF SECRETARY.

F. M. Schulz, M. D., Commissioner of Health:

SIR—I have the honor to submit herewith the financial report of the Health Department for the year ending December 31, 1902.

HEALTH DEPARTMENT FUND.

Jan.	27.	Medical books	$11 25
		Anti-toxine	102 55
		Medicine	3 00
		Vaccine virus	50 00
		Vaccine virus	88 00
		Repairs at Wisconsin General Hospital	85 79
		Kerosene	6 18
		Stationary	36 00
Feb.	1.	January pay roll, office	2,461 55
		January pay roll, hospital	148 00
		January pay roll, hospital	175 71
		January pay roll, garbage collection and disposal	6,342 63
		January pay roll, collection dead animals	158 50
		January pay roll, hospital	250 00
	24.	Printing	82 25
		Groceries	22 34
		Groceries	150 00
		Rent of land, garbage disposal	150 00
		Groceries	48 82
		Coal	182 25
		Coal	168 75
		Livery hire, hospital	61 00
		Meat	27 62
		Meat	19 47
		Repairs, hospital	85
		Repairs	15
		Milk	27 51
		Milk	9 80
		Groceries	9 22
		Buttons for uniforms	30 00
		Groceries	3 07

Feb. 24.	Milk	$29 76
	Formaldehyde	41 19
	Supplies, laboratory	15 55
	Supplies, hospital	2 80
	Rent, Wisconsin General Hospital	125 00
	Rent, Wisconsin General Hospital	125 00
	Rent of land, garbage disposal	150 00
	Stationery	5 00
	Stationery and books	28 00
Mch. 1.	February pay roll, office	2,461 55
	February pay roll, hospital	136 64
	February pay roll, hospital	257 85
	February pay roll, garbage collection and disposal	5,414 87
	February pay roll, collection dead animals	154 00
	February pay roll, garbage collection	13 00
	February pay roll, hospital	405 00
10.	Groceries	15 06
	Culture envelopes, laboratory	24 00
	Hardware, hospital	17 25
	Groceries	64 46
	Rent of land, garbage disposal	150 00
	Meat	29 69
	Sterilizer	42 50
	Butter and eggs	26 48
	Milk	10 95
	Brooms, etc.	5 10
	Groceries	3 76
	Medicine	5 21
	Medicine	13 97
	Groceries	20 31
	Milk tester	2 25
	Office sundries	13 25
	Office sundries	7 25
	Rent for land, garbage disposal	150 00
	Groceries	9 16
	Groceries	13 06
13.	Services, hospital	122 24
	Services, hospital	31 00
	Services, hospital	27 86
15.	Bedding, etc., smallpox patients	229 30
	Vaccine virus	1,110 50
	Printing	40 61
	Coal	185 50
	Coal	110 75
	Coal for crematory	113 16

Mch. 24.	Coal for crematory	$120 75
	Coal for crematory	147 14
	Coal for crematory	150 80
	Services, office	24 00
	Postage stamps	49 40
April 1.	March pay roll, office	2,461 55
	March pay roll, hospital	112 00
	March pay roll, hospital	218 27
	March pay roll, garbage disposal	5,567 04
	March pay roll, collection dead animals	158 50
	March pay roll, hospital	9 68
	March pay roll, garbage disposal	1,333 90
7.	Repair plumbing, office	8 58
	Repair plumbing, office	12 55
	Mattresses, hospital	127 50
	Sewer gas tester	25 00
	Coal, garbage disposal	4 50
	Brushes, hospital	6 00
	Kerosene	6 18
	Slippers, hospital	2 10
	Stationery	10 50
	Hauling water, garbage plant	119 25
	Vaccine virus	1,044 10
	Cost in re Goedicke	96 20
	Bedding, etc.	40 50
	Printing	29 50
	Ambulance	650 00
	Blacksmithing	11 80
	Postage stamps	4 00
	Analysis	5 00
	Groceries	12 87
	Groceries	6 00
	Oil stove, hospital	6 50
	Handle, garbage disposal	50
	Rent of land, garbage disposal	150 00
	Groceries	33 45
	Book	2 77
	Meat	24 80
	Meat	29 29
	Water, hospital	1 92
	Gas, hospital	2 40
	Meat	18 15
	Milk, etc.	14 02
	Milk	7 40
	Groceries	9 20

April	7.	Groceries	$3 07
		Coal, garbage disposal	19 50
	21.	Medicine	1 70
		Medicine	5 50
		Supplies, laboratory	3 58
		Supplies, laboratory	7 15
		Formaldehyde	41 10
		Medicine	14 31
		Medicine	20 70
		Medicine	2 40
		Groceries	22 48
		Coal, crematory	49 87
		Coal, crematory	111 44
		Coal, crematory	148 35
		Coal, crematory	149 73
		Coal, crematory	150 25
		Coal, crematory	192 34
		Rent of land, garbage disposal	150 00
May	1.	April pay roll, office	2,461 55
		April pay roll, hospital	138 00
		April pay roll, hospital	220 14
		April pay roll, garbage collection and disposal	4,789 86
		April pay roll, garbage collection	158 50
		April pay roll, garbage disposal	2,462 86
	5.	Printing	53 00
		Blank books	16 00
		Coal and wood	22 25
		Milk	13 44
		Coat and cap, hospital	6 00
		Repairs	6 10
		Books, etc.	4 80
		Maps	22 50
		Oil, crematory	4 16
		Stamp, etc.	1 00
		Milk	27 42
		Culture boxes	12 00
		Vaccine, etc.	141 50
		Medicine	7 70
		Medicine	30
		Medicine	13 46
		Medicine	3 85
		Milk tester	2 25
		Formaldehyde	37 70
		Sundry expenses	7 80
		Services of nurses	12 67

May	5.	Services of nurses	$90 00
		Soap, crematory	6 00
		Coal, crematory	148 35
		Ice, hospital	32 90
		Rent, Wisconsin General Hospital	125 00
		Postage stamps	2 00
	19.	Printing	53 00
		Hospital gowns	6 00
		Towels, etc., hospital	42 57
		Groceries	17 61
		Book	6 00
		Mattresses	8 75
		Mattresses	3 00
		Bedding	10 75
		Groceries	45 42
		Stethoscope	2 25
		Books	2 01
		Supplies	8 38
		Meat	28 49
		Meat	17 88
		Desk, office	50 00
		Oil	6 48
		Butter and eggs	22 98
		Milk	7 35
		Rakes, etc.	29 00
		Subscription, hospital	5 85
		Groceries	3 26
		Medicine	1 44
		Medicine	1 59
		Medicine	46 14
		Vaccine virus, etc.	174 05
		Groceries	17 69
		Services of nurses	36 67
		Soap, laboratory	5 00
		Filing cabinet	16 00
		Coal, crematory	19 94
		Coal, crematory	134 55
		Coal, crematory	134 55
		Coal, crematory	144 56
		Coal, crematory	150 93
		Coal, crematory	188 20
June	2.	Bedding	9 32
		Hardware	5 05
		Numbers	15 20
		Coal, hospital	124 88

June 2.	Livery, hospital	$82 00
	Livery, hospital	137 00
	Key	25
	Brushes, crematory	2 85
	Repairs	64 70
	Register	10 00
	Coal, crematory	31 41
	Oil, crematory	17 94
	May pay roll, office	2,461 55
	May pay roll, hospital	146 00
	May pay roll, hospital	310 68
	May pay roll, garbage collection	3,885 44
	May pay roll, collection dead animals	160 75
	May pay roll, garbage disposal	2,726 46
	May pay roll, inspecting garbage plant	521 25
	May pay roll, hospital, etc	562 37
	May pay roll, vaccinators	137 75
	May pay roll, vaccinators	101 25
	Printing	86 50
	Stationery	30 00
	Stationery	9 00
	Blank book	18 75
	Groceries	32 21
	Coal, crematory	2 50
	Settees	12 00
	Bedding	15 75
	Hardware	11 65
	Hardware	41 27
	Butter, etc.	22 40
	Groceries	88 02
	Frame, office	2 50
	Meat	31 58
	Meat	40 66
	Hose, etc.	11 77
	Milk	20 63
	Milk	15 70
	Pipe, etc.	4 24
	Groceries	3 76
	Lumber, hospital	1 63
	Groceries	11 55
	Paint, etc.	18 25
	Service of nurses	18 25
	Coal	197 34
	Services, office	87 78
	Service, garbage	6 97

June	2.	Bells	$6 00
		Postage stamps	129 20
	30.	Bedding	12 00
		Wood and coal, crematory	22 93
		Repairs	10 50
		Repairs	4 35
		Hose, crematory	18 75
		Fittings, etc.	21 52
		Glass, hospital	76
		Brackets, crematory	7 75
		Groceries	3 76
		Medicine	42 34
		Supplies	13 95
		Repairs	18 20
		Coal, crematory	107 29
		Coal, crematory	138 00
		Coal, crematory	138 00
		Coal, crematory	138 00
		Coal, crematory	196 64
		Wood, hospital	19 00
		Hose, hospital	14 50
		Hose, crematory	55 00
		Plates	37 50
		Desk phonograph	3 00
July	1.	June pay roll, office	2,461 55
		June pay roll, hospital	143 00
		June pay roll, hospital	307 19
		June pay roll, garbage collection	4,756 87
		June pay roll, collection of dead animals	70 00
		June pay roll, garbage disposal	2,792 26
		June pay roll, garbage hoist	535 25
		June pay roll, garbage inspection	493 75
		June pay roll, vaccinators	174 00
	14.	Printing	80 75
		Bedding	8 00
		Groceries	8 75
		Coal, hospital	67 50
		Meat	27 77
		Water, hospital	2 50
		Meat	28 54
		Repairs	3 28
		Repairs	1 13
		Letter head	25 00
		Milk	15 25
		Lumber	29 10

July	1.	Repairs	$75 15
		Formaldehyde	38 30
		Coal, crematory	163 88
		Coal crematory	195 10
		Butter and eggs	17 72
		Piping, etc., garbage expenses	41 61
		Pipe, crematory	28 93
		Supplies	4 46
		Livery	137 00
		Paint, crematory	65 00
		Tools, crematory	6 00
		Vaccine virus	96 25
		Vaccine virus	151 50
	28.	Groceries	39 29
		Milk and cream	33 60
		Oakum, etc., crematory	17 13
		Light	31 44
		Repairs, garbage expense	17 16
		Groceries	32 22
		Groceries	2 35
		Medicine	3 80
		Medicine	10 10
		Medicine	3 75
		Medicine	38 37
		Ventilators, hospital	4 00
		Repairs, garbage expenses	1 50
		Formaldehyde	37 70
		Oil, crematory	17 94
		Service of nurse	20 00
		Coal, crematory	175 10
		Repairs, hospital	4 63
		Directories	18 00
		Postage stamps	14 60
		Groceries	68 59
		Teaming, garbage expense	4 00
Aug.	1.	July pay roll, office	3,461 55
		July pay roll, hospital	150 00
		July pay roll, hospital	290 71
		July pay roll, garbage collection	4,996 25
		July pay roll, collection of dead animals	77 50
		July pay roll, garbage disposal	3,097 37
		July pay roll, garbage hoist	511 36
		July pay roll, garbage collection	528 00
		July pay roll, vaccinators	182 25
	11.	Cheese cloth, hospital	2 26

Aug. 11.	Groceries	$39 03
	Hardware, garbage expenses	13 37
	Hardware, hospital	6 42
	Repairs	22 00
	Covering, crematory	1 73
	Repairs, garbage expense	11 26
	Repairs, garbage expense	11 09
	Repairs, garbage expense	4 88
	Milk	8 76
	Oil	6 10
	Groceries	30 34
	Coal, hospital	70 50
	Rake, crematory	6 00
	Repairs, hospital	97 50
	Waste, crematory	18 90
	Ice, laboratory	10 00
	Ice, hospital	13 35
	Ice, hospital	8 85
	Telephone services	3 80
25.	Repairs, hospital	3 00
	Racks, etc.	2 75
	Butter and eggs	45 92
	Groceries	46 88
	Meat	29 35
	Meat	27 17
	Repairs, garbage expense	71 08
	Milk	11 45
	Coal, crematory	132 83
	Coal, crematory	110 05
	Coal, crematory	195 97
	Coal, crematory	109 88
	Coal, crematory	179 92
	Coal, crematory	112 64
	Butter and eggs	9 94
	Rent for Wisconsin General Hospital	125 00
	Postage stamps	13 20
	Stationery	16 25
Sept. 1.	August pay roll, office	2,446 55
	August pay roll, hospital	120 00
	August pay roll, hospital	190 59
	August pay roll, office	40 00
	August pay roll, collection of dead animals	77 50
	August pay roll, vaccinators	155 50
	August pay roll, garbage collection	5,559 00
	August pay roll, garbage disposal	3,536 06

Sept.	8.	Printing	$74 50
		Books	12 00
		Ropes, crematory	18 50
		Coal, crematory	35 75
		Repairs	1 00
		Supplies	40 70
		Medicine	11 30
		Medicine	4 95
		Formaldehyde	38 28
		Night soil	10 00
		Nurses	20 00
		Boiler, copper	25 00
		Coal	138 00
		Coal	191 65
		Rent	125 00
		Repairs	3 00
		Butter and eggs	20 17
		Stamps	4 00
		Books	14 00
	15.	Rent	250 00
		Rent	50 00
		Rent	34 00
	22.	Advertising	1 06
		Groceries	22 07
		Flour, etc.	3 23
		Meals	4 50
		G. cement and clay	2 17
		Rope	12 17
		Wire G.	7 90
		Meals	5 50
		Meat	16 55
		Fittings	10 20
		Paint	65 00
		Oil	6 12
		Repairs	43 10
		Medicine	3 95
		Medicine	14 85
		Supplies	1 35
		Lumber	14 45
		Repairs	51 70
		Repairs	49 10
		Coal	175 10
		Coal	178 71
		Coal	180 09
		Coal	180 95

Sept.	22.	Coal	$182 33
		Coal	182 85
		Coal	198 73
		Ice	5 05
	30.	Rent	50 00
Oct.	1.	October pay roll, office	2,486 55
		Rent	126 00
		Rent	50 00
		Towing	10 00
		Rent	52 00
		October pay roll, hospital	116 67
		October pay roll, hospital	187 13
		October pay roll, office	155 25
		October pay roll, office	5,539 00
		October pay roll	3,462 15
		October pay roll	75 00
	6.	Oil	29 15
		Coal	138 60
		Coal	168 02
		Coal	184 75
		Coal	198 56
		Telephone service	108 58
		Stamps	6 00
	20.	Advertising	3 00
		Printing	65 00
		Stationery	7 75
		Binding	44 00
		Groceries	13 83
		Flour	3 15
		Groceries	12 25
		Stamps	85 60
		Groceries	20 92
		Groceries	20 85
		Meat	15 91
		Livery	160 00
		Gas	17 52
		Meat	13 28
		Meat	17 79
		Groceries	6 53
		Milk	6 00
		Milk	8 05
		Formaldehyde	37 70
		Butter and eggs	15 60
Nov.	1.	November pay roll	2,486 55
		November pay roll	211 42

Nov.	1.	November pay roll, hospital	$113 00
		November pay roll, hospital	190 71
		November pay roll	217 50
		November pay roll	6,104 75
		November pay roll	3,496 07
		November pay roll	67 50
		November pay roll, hospital	60 71
		November pay roll	227 25
	3.	Garbage expense	50 00
		November pay roll, office	50 00
		Groceries	112 73
		Milk	45 87
		Garbage disposal	6 25
		November pay roll, hospital	2 58
Dec.	1.	Advertising	3 75
		Glass	5 50
		Button	2 85
		Cloth	37 15
		Blankets	157 71
		Groceries	15 14
		Burial	40 00
		Flour	4 05
		Expenses	18 00
		Mattresses	105 00
		Sheeting	1 30
		Supplies	26 00
		Electricity	189 60
		Meats	20 87
		Water	2 50
		Paint	4 15
		Paint	1 50
		Paint	63 75
		Repairs	1 75
		Repairs	13 74
		Repairs	22 45
		December pay roll, garbage	4,487 75
		December pay roll, garbage collection	3,185 97
		Rent of scow	52 00
		Rent of scow	100 00
		Rent of scow	52 00
		Towing charges	15 00
		Repairs	21 75
		Toweling	3 54
		Groceries	32 96
		Groceries	10 00

Dec.	1.	Garbage expense	$52 57
		Hospital expense	11 75
		Garbage	12 95
		Repairs	50
		Groceries	64 55
		Meat	10 71
		Garbage expense	159 48
		Butter	21 85
		Garbage expense, coal	2 85
		Hospital expense, coal	26 10
		Hospital expense, coal	25 20
		Hospital expense, coal	11 50
		Brick	31 20
		Lumber	28 00
		Lumber	154 00
		Meat	48 13
		Meat	46 86
		Hospital pay roll	17 70
		Glass	6 03
		December pay roll, garbage	62 50
		December pay roll, hospital	450 50
		December pay roll, hospital	246 75
		December pay roll, hospital	484 28
		December pay roll, hospital	141 00
		December pay roll, office	2,486 55
		Sundry garbage expense	40 00
		Isolation Hospital expense	6 24
		Glass	62
		Repairs	18 25
		Repairs	145 32
		Groceries	20 64
		Groceries	39 05
		Milk	26 80
		Oil	14 49
		Coal	30 55
		Coal	38 28
		Coal	58 29
		Subscriptions	5 20
		Medicine	1 74
		Medicine	19 05
		Medicine	7 30
		Medicine	1 50
		Supplies	17 79
		Supplies	72 45
		Guard house	70 00

Dec.	1.	Lumber	$25 30
		Expenses	18 00
		Repairs	26 35
		Crematory expenses	23 35
		December pay roll, hospital	10 00
		Crematory supplies	17 94
		Telephone service	52 00
		Telephone service	54 00
		Crematory supplies	197 19
		Crematory expenses	181 47
		Crematory expenses	194 59
		Isolation Hospital expense	57 26
		Crematory expense	23 25
		Stationery	51 00
		Nipples	7 90
		Groceries	1 15
		Groceries	20 00
		Milk	27 85
		Book	2 50
		Water	49 02
		Oil	7 14
		Coal	22 50
		Coal	6 00
		Medicine	8 82
		Medicine	5 95
		Supplies	5 10
		Lumber	2 60
		Sundries	7 82
		Nurse	16 00
		Coal	59 90
		Formaline	39 90
		Ice	10 00
	15.	Coal	3,808 97
		Printing	335 25
		Hospital expense, sundries	7 90
		Garbage expense, sundries	22 08
		Garbage expense, sundries	23 49
		Garbage expense, sundries	11 53
		Garbage expense, sundries	19 95
		Garbage expense	164 98
		Garbage expense	118 75
		Garbage expense	13 46
		Hospital expense	6 00
		Office expense	85 00
		Garbage expense	10 64

Dec. 15.	Garbage expense	$14 28
	Office expense	11 32
	Garbage expense	9 50
	Hospital expense, sundries	71 46
	Storm sash	20 35
	Office expenses	100 00
	December pay roll, hospital	125 00
	Ice	18 50
	Sundries, hospital	22 60
	Stamps	12 60
	December pay roll, hospital	253 50
	December pay roll, hospital	145 00
	December pay roll, office	2,486 55
	December pay roll, hospital	475 56
	December pay roll, garbage	4,134 00
	December pay roll, garbage disposal	3,072 86
	December pay roll, office	67 50
	December pay roll, office	30 00
	Hospital expense	13 00
	Sundry hospital expense	9 50
	Crematory	22 14
	Ice	3 50
	Ice	5 80
	Total	$164,036 26

RECAPITULATION.

Office pay rolls		$29,663 60
Garbage collection pay rolls	$62,397 72	
Garbage disposal pay roll	33,410 23	
Supplies for garbage crematory, coal, etc	12,332 22	
Expense for garbage crematory, repairs, etc	2,866 71	
		111,006 88
Hospital pay rolls	$9,088 76	
Supplies for hospital	4,898 36	
Expense, repairs, etc	3,287 66	
		17,274 78
Postage	$320 60	
Books and stationery	433 13	
Printing	900 35	
Office expense	838 28	
		2,492 37
Supplies for laboratory, etc	$640 18	
Vaccine and anti-toxine	2,958 45	
		3,598 63
Total		$164,036 26

Respectfully submitted,

FRANK B. SCHUTZ,

Secretary.

F. M. Schulz, M. D., Commissioner of Health:

SIR—The following is a statement of the work done in the collection and disposal of garbage for the year 1902.

Annual Report of Collection and Dispos of Garbage from January 1 to December 31, 1902.

MONTH. 1902.	REPORT OF BURYING GARBAGE AT THE FARM.									
	Single loads collected.	Double loads collected.	Average by tons.	Inspectors employed.	Foremen employed.	Timekeeper employed.	Laborers	Average No. days.	Single teams.	Double teams.
January	2,805	329	3,057	4	2	1	27	25	62	13
February	2,229	276	2,756	4	2	1	26	22	62	13
March	1,072	171	1,476	4	2	1	24	13	61	13
April	.....	.....	.....	4	2	.....	.....	.....	.....	.....
May	.....	.....	.....	4	2	.....	.....	.....	.....	.....
June	.....	.....	.....	4	3	.....	.....	.....	.....	.....
July	.....	.....	.....	4	3	.....	.....	.....	.....	.....
August	.....	.....	.....	4	3	.....	.....	.....	.....	.....
September	.....	.....	.....	4	3	.....	.....	.....	.....	.....
October	.....	.....	.....	4	3	.....	.....	.....	.....	.....
November	.....	.....	.....	4	3	.....	.....	.....	.....	.....
December	.....	.....	.....	4	3	.....	.....	.....	.....	.....
	6,106	776	7,289							

LIBRARY
UNIVERSITY OF CALIFORNIA

Annual Report of Collection and Disposal of Garbage from January 1, to December 31, 1902.

MONTH. 1902.	Report of Garbage Cremated at the Plant.							Garbage Hoist on Erie Street.				
	Single loads collected.	Double loads collected.	Average by tons.	Coal cons'md by tons.	Single teams employed.	Laborers employed.	Average No. days.	Superint'dt.	Timekeeper.	Engineer.	Laborers.	Watchmen.
January	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
February	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
*March	670	65	608	36	.....	32	8	.....	.....	1	10	1
*April	2,898	140	2,822	172	.....	60	22	1	1	1	14	1
May	3,571	.....	3,325	242	74	65	27	1	1	1	10	1
June	3,304	.....	3,849	302	76	65	27	1	1	1	9	1
July	3,983	.....	3,261	320	77	65	27	1	1	1	10	1
August	4,006	.....	3,444	331	78	62	27	1	1	1	7	1
September	4,019	.....	3,436	326	78	62	25	1	1	1	7	1
October	4,200	.....	3,502	320	78	61	27	1	1	1	4	1
November	3,206	.....	2,621	262	78	63	21	1	1	1	4	1
December	2,936	.....	2,341	269	78	62	18	1	1	1	4	1
	33,293	205	27,175	2,588								

Amount of garbage collected, in tons, 34,464.

* Farm up to March 20, 1902—employing 61 single and 13 double teams in March, and 69 double and 10 single teams during April, 1902.

Respectfully submitted,

JAS. GRAHAM,

Supt. Collection and Disposal of Garbage.

JAN 25 1904
Withdrawn 1942

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